Sequence Listing

Baker, Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan 1.
Ferrara, Napoleone
Fong, Sherman
Gao, Wei-Qiang
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Godowski, Paul J.
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<223> Glycosaminoglycan Attachment Site.
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Cys	Thr	Arg	Asn	Thr 380	His	Gly	Ser	Gly	Ile 385	Tyr	Pro	Gly	Asn	Pro 390
Gln	Asp	Glu	Arg	Lys 395	Ala	Trp	Arg	Arg	Cys 400	Asp	Arg	Gly	Gly	Phe 405
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Ile Arg Lys Lys Glu Asn Ile Arg Leu Leu Gly Glu Gln Ile Ile
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<211> 322

<212> PRT

<213> Homo sapiens

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Ser Thr Cys Val Ala Phe Ser Leu Val Ala Ser Val Gly Ala Trp
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Thr Gly Ser Met Gly Asn Trp Ser Met Phe Thr Trp Cys Phe Cys
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Phe Ser Val Thr Leu Ile Ile Leu Ile Val Glu Leu Cys Gly Leu 80 85 90

Gln Ala Arg Phe Pro Leu Ser Trp Arg Asn Phe Pro Ile Thr Phe 95 100 105

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Ser	Gly	Leu	Ala	Leu 245	Leu	Ser	Val	Leu	Leu 250	Tyr	Ala	Thr	Ala	Leu 255
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<212> DNA

<213> Homo sapiens

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His Met Asp Pro Asn Tyr Cys His Pro Ser Thr Ser Leu His Leu
50 55 60

Cys Ser Leu Ala Trp Ser Phe Thr Arg Leu Leu His Pro Pro Leu
65 70 75

Ser Pro Gly Ile Ser Gln Val Val Lys Asp His Val Thr Lys Pro 80 85 90

Thr Ala Met Ala Gln Gly Arg Val Ala His Leu Ile Glu Trp Lys 95 100 105

Gly Trp Ser Lys Pro Ser Asp Ser Pro Ala Ala Leu Glu Ser Ala 110 115 120

Phe	Ser	Ser	Tyr	Ser 125	Asp	Leu	Ser	Glu	Gly 130	Glu	Gln	Glu	Ala	Arg 135
Phe	Ala	Ala	Gly	Val 140	Ala	Glu	Gln	Phe	Ala 145	Ile	Ala	Glu	Ala	Lys 150
Leu	Arg	Ala	Trp	Ser 155	Ser	Val	Asp	Gly	Glu 160	Asp	Ser	Thr	Asp	Asp 165
Ser	Tyr	Asp	Glu	Asp 170	Phe	Ala	Gly	Gly	Met 175	Asp	Thr	Asp	Met	Ala 180
Gly	Gln	Leu	Pro	Leu 185	Gly	Pro	His	Leu	Gln 190	Asp	Leu	Phe	Thr	Gly 195
His	Arg	Phe	Ser	Arg 200	Pro	Val	Arg	Gln	Gly 205	Ser	Val	Glu	Pro	Glu 210
Ser	Asp	Cys	Ser	Gln 215	Thr	Val	Ser	Pro	Asp 220	Thr	Leu	Cys	Ser	Ser 225
Leu	Cys	Ser	Leu	Glu 230	Asp	Gly	Leu	Leu	Gly 235	Ser	Pro	Ala	Arg	Leu 240
Ala	Ser	Gln	Leu	Leu 245	Gly	Asp	Glu	Leu	Leu 250	Leu	Ala	Lys	Leu	Pro 255
Pro	Ser	Arg	Glu	Ser 260	Ala	Phe	Arg	Ser	Leu 265	Gly	Pro	Leu	Glu	Ala 270
Gln	Asp	Ser	Leu	Tyr 275	Asn	Ser	Pro	Leu	Thr 280	Glu	Ser	Cys	Leu	Ser 285
Pro	Ala	Glu	Glu	Glu 290	Pro	Ala	Pro	Cys	Lys 295	Asp	Cys	Gln	Pro	Leu 300
Cys	Pro	Pro	Leu	Thr 305	Gly	Ser	Trp	Glu	Arg 310	Gln	Arg	Gln	Ala	Ser 315
Asp	Leu	Ala	Ser	Ser 320	Gly	Val	Val	Ser	Leu 325	Asp	Glu	Asp	Glu	Ala 330
Glu	Pro	Glu	Glu	Gln 335										
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<213> Homo sapiens

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Pro Ile Ser Leu Glu Ser Glu Ala Asn Leu Asn Ser Asp Lys Glu
50 55 60

Asn Ile Thr Thr Ser Asn Leu Lys Ala Ser His Ser Pro Pro Leu
65 70 75

Asn Leu Pro Asn Asn Ser His Gly Ile Thr Asp Phe Ser Ser Asn 80 85 90

Ser Ser Ala Glu His Ser Leu Gly Ser Leu Lys Pro Thr Ser Thr 95 100 105

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Trp	Ser	Leu	Val	Asn 155	Asp	Thr	Val	Lys	Thr 160	Pro	Asp	Asn	Ser	Ser 165
Ile	Thr	Val	Ser	Ile 170	Leu	Ser	Ser	Glu	Pro 175	Thr	Ser	Pro	Ser	Val 180
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Gln	Pro	Thr	Leu	Lys 215	Phe	Thr	Asn	Asn	Ser 220	Lys	Leu	Phe	Pro	Asn 225
Thr	Ser	Asp	Pro	Gln 230	Lys	Glu	Asn	Arg	Asn 235	Thr	Gly	Ile	Val	Phe 240
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Val	Gly	Tyr	Leu	Leu 260	Суѕ	Gly	Lys	Arg	Lys 265	Thr	Asp	Ser	Phe	Ser 270
His	Arg	Arg	Leu	Tyr 275	Asp	Asp	Arg	Asn	Glu 280	Pro	Val	Leu	Arg	Leu 285
Asp	Asn	Ala	Pro	Glu 290	Pro	Tyr	Asp	Val	Ser 295	Phe	Gly	Asn	Ser	Ser 300
Tyr	Tyr	Asn	Pro	Thr 305	Leu	Asn	Asp	Ser	Ala 310	Met	Pro	Glu	Ser	Glu 315
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<211> 1594

<212> DNA

<213> Homo sapiens

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Arg Leu Arg Arg Arg Asp Leu Leu Gly Phe Asn Lys Arg Ala

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Lys Ala Thr Phe Leu Glu Asp Val Ala Gly Ser Gly Glu Ala Glu
35 40 45

Gly Ser Ser Ala Ser Ser Pro Ser Leu Pro Pro Pro Trp Thr Pro
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Gly Pro Ser Pro Pro Thr Asn Phe Leu Asp Gly Ile Val Asp Phe

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<212> PRT

<213> Homo sapiens

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Lys	Gln	Lys	Ala	Ser 125	Ala	Tyr	Tyr	Pro	Ser 130	Ser	Phe	Pro	Lys	Lys 135
Lys	Tyr	Val	Asp	Gln 140	Ser	Asp	Arg	Ala	Gly 145	Gly	Pro	Arg	Ala	Phe 150
Ser	Glu	Val	Pro	Asp 155	Arg	Ala	Pro	Asp	Ser 160	Arg	Pro	Glu	Glu	Ala 165
Leu	Asp	Ser	Ser	Arg 170	Gln	Leu	Gln	Ala	Asp 175	Ile	Leu	Ala	Ala	Thr 180
Gln	Asn	Leu	Lys	Ser 185	Pro	Thr	Arg	Ala	Ala 190	Leu	Gly	Gly	Gly	Asp 195
Gly	Ala	Arg	Met	Val 200	Glu	Gly	Arg	Gly	Ala 205	Glu	Glu	Glu	Glu	Lys 210
Gly	Ser	Gln	Glu	Gly 215	Asp	Gln	Glu	Val	Gln 220	Gly	His	Gly	Val	Pro 225
Val	Glu	Thr	Pro	Glu 230	Ala	Gln	Glu	Glu	Pro 235	Cys	Ser	Gly	Val	Leu 240
Glu	Gly	Ala	Val	Val 245	Ala	Gly	Glu	Gly	Gln 250	Gly	Glu	Leu	Glu	Gly 255
Ser	Leu	Leu	Leu	Ala 260	Gln	Glu	Ala	Gln	Gly 265	Pro	Val	Gly	Pro	Pro 270
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cetggeetge eteetgetgg eeetetgeet gggeagtggg gaggetggee 250

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Thr G	ly Thi	: Asn	Ile 35	Gly	Glu	Ala	Leu	Gly 40	His	Gly	Leu	Gly	Asp 45
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Arg G	lu Ala	a Val	Gly 80	Thr	Gly	Val	Arg	Gln 85	Val	Pro	Gly	Phe	Gly 90
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Leu G	ly Ası	n Thr	Gly 110	His	Glu	Ile	Gly	Arg 115	Gln	Ala	Glu	Asp	Val 120
Ile A	rg His	s Gly	Ala 125	Asp	Ala	Val	Arg	Gly 130	Ser	Trp	Gln	Gly	Val 135
Pro G	ly His	s Ser	Gly 140	Ala	Trp	Glu	Thr	Ser 145	Gly	Gly	His	Gly	Ile 150
Phe G	ly Se	Gln	Gly 155	Gly	Leu	Gly	Gly	Gln 160	Gly	Gln	Gly	Asn	Pro 165
Gly G	ly Le	ı Gly	Thr 170	Pro	Trp	Val	His	Gly 175	Tyr	Pro	Gly	Asn	Ser 180
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Gly G	ly Ası	Gly	Gly 200	Pro	Pro	Asn	Phe	Gly 205	Thr	Asn	Thr	Gln	Gly 210
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Asn G	lu Gly	/ Cys	Thr 230	Asn	Pro	Pro	Pro	Ser 235	Gly	Ser	Gly	Gly	Gly 240

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Gly	Asp	Asn	Tyr	Arg 380	Gly	Gln	Gly	Ser	Ser 385	Trp	Gly	Ser	Gly	Gly 390
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Pro	Gly	Met	Phe	Asn 410	Phe	Asp	Thr	Phe	Trp 415	Lys	Asn	Phe	Lys	Ser 420
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<400> 53

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Thr Ser Gln Gly Leu Gln Ala Gln Leu Ala Gln Ala Phe Phe His

Ile Thr Pro Thr Thr Thr Ser Leu Gly Ala Gln Pro Ser Gln

95

Asn Gln Pro Pro Ser Leu Arg Arg Thr Val Glu Phe Val Ala Glu 125 135

Arg Ile Gly Ser Asn Cys Val Lys His Ile Lys Ala Thr Leu Val 150 140 145

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Leu	Gly	Arg	Glu	Phe 200	Cys	Gln	Arg	Lys	Ser 205	Pro	Gly	Ala	Val	Arg 210
Ala :	Leu	Leu	Pro	Glu 215	Glu	Thr	Pro	Ala	Ala 220	Val	Leu	Ser	Ser	Ala 225
Glu i	Asn	Ile	Ala	Val 230	Gly	Leu	Ala	Thr	Glu 235	Lys	Ala	Cys	Ala	Trp 240
Leu :	Ser	Ala	Asn	Ile 245	Thr	Ala	Leu	Ile	Arg 250	Arg	Glu	Val	Lys	Ala 255
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<211> 2401

<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Pro Val Asn Leu Lys Lys Trp Ser Ile Thr Asp Gly Tyr Val Pro
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Ile Leu Gly Asn Lys Thr Leu Pro Ser Arg Cys His Gln Cys Val
65 70 75

Ile Val Ser Ser Ser His Leu Leu Gly Thr Lys Leu Gly Pro 80 85 90

Glu Ile Glu Arg Ala Glu Cys Thr Ile Arg Met Asn Asp Ala Pro 95 100 105

Thr Thr Gly Tyr Ser Ala Asp Val Gly Asn Lys Thr Thr Tyr Arg
110 115 120

Val Val Ala His Ser Ser Val Phe Arg Val Leu Arg Arg Pro Gln
125 130 135

Glu Phe Val Asn Arg Thr Pro Glu Thr Val Phe Ile Phe Trp Gly 140 145 150

Pro Pro Ser Lys Met Gln Lys Pro Gln Gly Ser Leu Val Arg Val 155 160 165

Ile Gln Arg Ala Gly Leu Val Phe Pro Asn Met Glu Ala Tyr Ala

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Glu Thr Gly Lys	Asp Arg Glu	Lys Ser His Ser	Trp Leu Ser Thr
	200	205	210
Gly Trp Phe Thr	Met Val Ile	Ala Val Glu Leu	Cys Asp His Val
	215	220	225
His Val Tyr Gly	Met Val Pro	Pro Asn Tyr Cys	Ser Gln Arg Pro
	230	235	240
Arg Leu Gln Arg	Met Pro Tyr	His Tyr Tyr Glu	Pro Lys Gly Pro
	245	250	255
Asp Glu Cys Val	Thr Tyr Ile	Gln Asn Glu His	Ser Arg Lys Gly
	260	265	270
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<211> 4277

<212> DNA

<213> Homo sapiens

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<400> 58

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Asp Leu Asn Glu Val Pro Gln Val Thr Val Gln Pro Ala Ser Thr
35 40 45

Val Gln Lys Pro Gly Gly Thr Val Ile Leu Gly Cys Val Val Glu
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Asn Gly Ser Asp Asp Ala Leu Gly Val Leu Ile Thr His Gly Thr
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<211> 1115

<212> PRT

<213> Homo sapiens

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Thr	Val	Thr	Leu	Ala 125	Asn	Leu	Gln	Asp	Phe 130	Lys	Leu	Asp	Val	Gln 135
His	Val	Ile	Glu	Val 140	Asp	Glu	Gly	Asn	Thr 145	Ala	Val	Ile	Ala	Cys 150
His	Leu	Pro	Glu	Ser 155	His	Pro	Lys	Ala	Gln 160		Arg	Tyr	Ser	Val 165
Lys	Gln	Glu	Trp	Leu 170	Glu	Ala	Ser	Arg	Gly 175	Asn	Tyr	Leu	Ile	Met 180
Pro	Ser	Gly	Asn	Leu 185	Gln	Ile	Val	Asn	Ala 190	Ser	Gln	Glu	Asp	Glu 195
Gly	Met	Tyr	Lys	Cys 200	Ala	Ala	Tyr	Asn	Pro 205	Val	Thr	Gln	Glu	Val 210
Lys	Thr	Ser	Gly	Ser 215	Ser	Asp	Arg	Leu	Arg 220	Val	Arg	Arg	Ser	Thr 225
Ala	Glu	Ala	Ala	Arg 230	Ile	Ile	Tyr	Pro	Pro 235	Glu	Ala	Gln	Thr	Ile 240
Ile	Val	Thr	Lys	Gly 245	Gln	Ser	Leu	Ile	Leu 250	Glu	Cys	Val	Ala	Ser 255
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Val	Thr	Gly	Tyr	Asn 275	Lys	Thr	Arg	Phe	Leu 280	Leu	Ser	Asn	Leu	Leu 285
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Ala	Asp	Asn	Gly	Val 305	Gly	Gln	Pro	Gly	Ala 310	Ala	Val	Ile	Leu	Tyr 315
Asn	Val	Gln	Val	Phe 320	Glu	Pro	Pro	Glu	Val 325	Thr	Met	Glu	Leu	Ser 330
Gln	Leu	Val	Ile	Pro 335	Trp	Gly	Gln	Ser	Ala 340	Lys	Leu	Thr	Суѕ	Glu 345
Val	Arg	Gly	Asn	Pro 350	Pro	Pro	Ser	Val	Leu 355	Trp	Leu	Arg	Asn	Ala 360
Val	Pro	Leu	Ile	Ser 365	Ser	Gln	Arg	Leu	Arg 370	Leu	Ser	Arg	Arg	Ala 375

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Cys	Met	Ala	Glu	Asn 395	Glu	Val	Gly	Ser	Ala 400	His	Ala	Val	Val	Gln 405
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Ala	Glu	Leu	Ala	Thr 425	Gly	Thr	Pro	Pro	Val 430	Ser	Pro	Ser	Lys	Leu 435
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Pro	Pro	Thr	Ser	Val 455	Gly	Pro	Ala	Ser	Pro 460	Lys	Cys	Pro	Gly	Glu 465
Lys	Gly	Gln	Gly	Ala 470	Pro	Ala	Glu	Ala	Pro 475	Ile	Ile	Leu	Ser	Ser 480
Pro	Arg	Thr	Ser	Lys 485	Thr	Asp	Ser	Tyr	Glu 490	Leu	Val	Trp	Arg	Pro 495
Arg	His	Glu	Gly	Ser 500	Gly	Arg	Ala	Pro	Ile 505	Leu	Tyr	Tyr	Val	Val 510
Lys	His	Arg	Lys	Gln 515	Val	Thr	Asn	Ser	Ser 520	Asp	Asp	Trp	Thr	Ile 525
Ser	Gly	Ile	Pro	Ala 530	Asn	Gln	His	Arg	Leu 535	Thr	Leu	Thr	Arg	Leu 540
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Ala	Gly	Glu	Gly	Gln 560	Thr	Ala	Met	Val	Thr 565	Phe	Arg	Thr	Gly	Arg 570
Arg	Pro	Lys	Pro	Glu 575	Ile	Met	Ala	Ser	Lys 580	Glu	Gln	Gln	Ile	Gln 585
Arg	Asp	Asp	Pro	Gly 590	Ala	Ser	Pro	Gln	Ser 595	Ser	Ser	Gln	Pro	Asp 600
His	Gly	Arg	Leu	Ser 605	Pro	Pro	Glu	Ala	Pro 610	Asp	Arg	Pro	Thr	Ile 615
Ser	Thr	Ala	Ser	Glu 620	Thr	Ser	Val	Tyr	Val 625	Thr	Trp	Ile	Pro	Arg 630
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Pro	Pro	Ser	Arg	Leu 665	Ser	Val	Glu	Ile	Thr 670	Gly	Leu	Glu	Lys	Gly 675
Thr	Ser	Tyr	Lys	Phe 680	Arg	Val	Arg	Ala	Leu. 685	Asn	Met	Leu	Gly	Glu 690
Ser	Glu	Pro	Ser	Ala 695	Pro	Ser	Arg	Pro	Tyr 700	Val	Val	Ser	Gly	Tyr 705
Ser	Gly	Arg	Val	Tyr 710	Glu	Arg	Pro	Val	Ala 715	Gly	Pro	Tyr	Ile	Thr 720
Phe	Thr	Asp	Ala	Val 725	Asn	Glu	Thr	Thr	Ile 730	Met	Leu	Lys	Trp	Met 735
Tyr	Ile	Pro	Ala	Ser 740	Asn	Asn	Asn	Thr	Pro 745	Ile	His	Gly	Phe	Tyr 750
Ile	Tyr	Tyr	Arg	Pro 755	Thr	Asp	Ser	Asp	Asn 760	Asp	Ser	Asp	Tyr	Lys 765
Lys	Asp	Met	Val	Glu 770	Gly	Asp	Lys	Tyr	Trp 775	His	Ser	Ile	Ser	His 780
Leu	Gln	Pro	Glu	Thr 785	Ser	Tyr	Asp	Ile	Lys 790	Met	Gln	Cys	Phe	Asn 795
Glu	Gly	Gly	Glu	Ser 800	Glu	Phe	Ser	Asn	Val 805	Met	Ile	Суз	Glu	Thr 810
Lys	Ala	Arg	Lys	Ser 815	Ser _.	Gly	Gln	Pro	Gly 820	Arg	Leu	Pro	Pro	Pro 825
Thr	Leu	Ala	Pro	Pro 830	Gln	Pro	Pro	Leu	Pro 835	Glu	Thr	Ile	Glu	Arg 840
Pro	Val	Gly	Thr	Gly 845	Ala	Met	Val	Ala	Arg 850	Ser	Ser	Asp	Leu	Pro 855
Tyr	Leu	Ile	Val	Gly 860	Val	Val	Leu	Gly	Ser 865	Ile	Val	Leu	Ile	Ile 870
Val	Thr	Phe	Ile	Pro 875	Phe	Cys	Leu	Trp	Arg 880	Ala	Trp	Ser	Lys	Gln 885
Lys	His	Thr	Thr	Asp 890	Leu	Gly	Phe	Pro	Arg 895	Ser	Ala	Leu	Pro	Pro 900
Ser	Cys	Pro	Tyr	Thr 905	Met	Val	Pro	Leu	Gly 910	Gly	Leu	Pro	Gly	His 915
Gln	Ala	Ser	Gly	Gln 920	Pro	Tyr	Leu	Ser	Gly 925	Ile	Ser	Gly	Arg	Ala 930
Cys	Ala	Asn	Gly	Ile 935	His	Met	Asn	Arg	Gly 940	Cys	Pro	Ser	Ala	Ala 945

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                                                          975
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 Pro Lys Ser Ser Pro Asp Glu Gly Ser Phe Leu Tyr Thr Leu Pro
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                                     1000
 Asp Asp Ser Thr His Gln Leu Leu Gln Pro His His Asp Cys Cys
                1010
                                     1015
 Gln Arg Gln Glu Gln Pro Ala Ala Val Gly Gln Ser Gly Val Arg
                                     1030
                1025
 Arg Ala Pro Asp Ser Pro Val Leu Glu Ala Val Trp Asp Pro Pro
                1040
                                     1045
 Phe His Ser Gly Pro Pro Cys Cys Leu Gly Leu Val Pro Val Glu
                                     1060
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 Glu Val Asp Ser Pro Asp Ser Cys Gln Val Ser Gly Gly Asp Trp
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                                     1075
 Cys Pro Gln His Pro Val Gly Ala Tyr Val Gly Gln Glu Pro Gly
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 agacaccaca tgtacaccaa cgtcagcgga ttgacaagct ttggtgagaa 850
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Phe	Pro	Leu	Val	Asp 95	Gly	His	Asn	Asp	Leu 100	Pro	Gln	Val	Leu	Arg 105
Gln	Arg	Tyr	Lys	Asn 110	Val	Leu	Gln	Asp	Val 115	Asn	Leu	Arg	Asn	Phe 120
Ser	His	Gly	Gln	Thr 125	Ser	Leu	Asp	Arg	Leu 130	Arg	Asp	Gly	Leu	Val 135
Gly	Ala	Gln	Phe	Trp 140	Ser	Ala	Ser	Val	Ser 145	Cys	Gln	Ser	Gln	Asp 150
Gln	Thr	Ala	Val	Arg 155	Leu	Ala	Leu	Glu	Gln 160	Ile	Asp	Leu	Ile	His 165
Arg	Met	Cys	Ala	Ser 170	Tyr	Ser	Glu	Leu	Glu 175	Leu	Val	Thr	Ser	Ala 180
Glu	Gly	Leu	Asn	Ser 185	Ser	Gln	Lys	Leu	Ala 190	Cys	Leu	Ile	Gly	Val 195
Xaa	Gly	Gly	His	Ser 200	Leu	Asp	Ser	Ser	Leu 205	Ser	Val	Leu	Arg	Ser 210
Phe	Tyr	Val	Leu	Gly 215	Val	Arg	Tyr	Leu	Thr 220	Leu	Thr	Phe	Thr	Cys 225
Ser	Thr	Pro	Trp	Ala 230	Glu	Ser	Ser	Thr	Lys 235	Phe	Arg	His	His	Met 240
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Val	Ile	Phe	Ser	His 290	Ser	Ala	Ala	Arg	Ala 295	Val	Cys	Asp	Asn	Leu 300
Leu	Asn	Val	Pro	Asp 305	Asp	Ile	Leu	Gln	Leu 310	Leu	Lys	Asn	Gly	Gly 315
Ile	Val	Met	Val	Thr 320	Leu	Ser	Met	Gly	Val 325	Leu	Gln	Cys	Asn	Leu 330
Leu	Ala	Asn	Val	Ser 335	Thr	Val	Ala	Asp	His 340	Phe	Asp	His	Ile	Arg 345

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 Gly Thr Gly Arg Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr
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 Glu Ala Glu Phe Pro Tyr Gly Gln Leu Ser Thr Ser Cys His Ser
 His Leu Val Pro Gln Asn Gly His Gln Ala Thr His Leu Glu Val
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 Thr Lys Gln Pro Thr Asn Arg Val Pro Trp Arg Ser Ser Asn Ala
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<211> 183

<212> PRT

<213> Homo sapiens

<400> 68

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Gln Asn Val Ser Gln Lys Asp Cys Asn Cys Leu His Val Val Glu
50 55 60

Pro Met Pro Val Pro Gly His Asp Val Glu Ala Tyr Cys Leu Leu 657075

Cys Glu Cys Arg Tyr Glu Glu Arg Ser Thr Thr Thr Ile Lys Val 80 85 90

Ile Ile Val Ile Tyr Leu Ser Val Val Gly Ala Leu Leu Tyr 95 100 105

Met Ala Phe Leu Met Leu Val Asp Pro Leu Ile Arg Lys Pro Asp 110 115 120

Ala Tyr Thr Glu Gln Leu His Asn Glu Glu Glu Asn Glu Asp Ala 125 130 135

Arg Ser Met Ala Ala Ala Ala Ser Leu Gly Gly Pro Arg Ala

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Met Leu Ser

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<211> 259

<212> PRT

<213> Homo sapiens

<400> 70

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$$35$$
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Gly	Arg	Pro `	His	Thr 170	Lys	Met	Ser	His	Ile 175	Lys	Gly	His	Glu	Gly 180
Asp	Pro	Cys	Leu	Arg 185	Ser	Ser	Asp	Cys	Ile 190	Glu	Gly	Phe	Cys	Cys 195
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Gly	Glu	Val	Cys	Thr 215	Lys	Gln	Arg	Lys	Lys 220	Gly	Ser	His	Gly	Leu 225
Glu	Ile	Phe	Gln	Arg 230	Cys	Asp	Cys	Ala	Lys 235	Gly	Leu	Ser	Cys	Lys 240
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<212> DNA

<213> Homo sapiens

<400> 71

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<211> 363

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<213> Homo sapiens

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Phe	Gly	Glu	Leu	Ala 35	Pro	Pro	Lys	Met	Ala 40	Asn	Ile	Thr	Ser	Ser 45
Gln	Ile	Leu	Asp	Gln 50	Leu	Lys	Ala	Pro	Ser 55	Leu	Gly	Gln	Phe	Thr 60
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Thr	Thr	Ser	Trp	Asp 80	Leu	Lys	Pro	Pro	Thr 85	Ser	Gln	Ser	Ser	Val 90
Leu	Ser	His	Leu	Asp 95	Phe	Lys	Ser	Gln	Pro 100	Glu	Pro	Ser	Pro	Val 105
Leu	Ser	Gln	Leu	Ser 110	Gln	Arg	Gln	Gln	His 115	Gln	Ser	Gln	Ala	Val 120
Thr	Val	Pro	Pro	Pro 125	Gly	Leu	Glu	Ser	Phe 130	Pro	Ser	Gln	Ala	Lys 135
Leu	Arg	Glu	Ser	Thr 140	Pro	Gly	Asp	Ser	Pro 145	Ser	Thr	Val	Asn	Lys 150
Leu	Leu	Gln	Leu	Pro 155	Ser	Thr	Thr	Ile	Glu 160	Asn	Ile	Ser	Val	Ser 165
Val	His	Gln	Pro	Gln 170	Pro	Lys	His	Ile	Lys 175	Leu	Ala	Lys	Arg	Arg 180
Ile	Pro	Pro	Ala	Ser 185	-	Ile		Ala	Ser 190	Ala	Val	Glu	Met	Pro 195
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Glu	Phe	Gly	Ser	Glu 215	Pro	Ser	Leu	Ser	Glu 220	Phe	Gly	Ser	Ala	Pro 225
Ser	Ser	Glu	Asn	Ser 230	Asn	Gln	Ile	Pro	Ile 235	Ser	Leu	Tyr	Ser	Lys 240
Ser	Leu	Ser	Glu	Pro 245	Leu	Asn	Thr	Ser	Leu 250	Ser	Met	Thr	Ser	Ala 255
Val	Gln	Asn	Ser	Thr 260	Tyr	Thr	Thr	Ser	Val 265	Ile	Thr	Ser	Cys	Ser 270
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<211> 341

<212> PRT

<213> Homo sapiens

<400> 77

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Ala Gly Leu Tyr Thr Cys Asn Leu His His His Tyr Cys His Leu 35 40 45

Tyr Glu Ser Leu Ala Val Arg Leu Glu Val Thr Asp Gly Pro Pro
50 55 60

Ala Thr Pro Ala Tyr Trp Asp Gly Glu Lys Glu Val Leu Ala Val
65 70 75

Ala Arg Gly Ala Pro Ala Leu Leu Thr Cys Val Asn Arg Gly His
80 85 90

Val Trp Thr Asp Arg His Val Glu Glu Ala Gln Gln Val Val His
95 100 105

Trp Asp Arg Gln Pro Pro Gly Val Pro His Asp Arg Ala Asp Arg
110 115 120

Leu Leu Asp Leu Tyr Ala Ser Gly Glu Arg Arg Ala Tyr Gly Pro 125 130 135

Leu	Phe	Leu	Arg	Asp 140	Arg	Val	Ala	Val	Gly 145	Ala	Asp	Ala	Phe	Glu 150
Arg	Gly	Asp	Phe	Ser 155	Leu	Arg	Ile	Glu	Pro 160	Leu	Glu	Val	Ala	Asp 165
Glu	Gly	Thr	Tyr	Ser 170	Cys	His	Leu	His	His 175	His	Tyr	Cys	Gly	Leu 180
His	Glu	Arg	Arg	Val 185	Phe	His	Leu	Thr	Val 190	Ala	Glu	Pro	His	Ala 195
Glu	Pro	Pro	Pro	Arg 200	Gly	Ser	Pro	Gly	Asn 205	Gly	Ser	Ser	His	Ser 210
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Leu	Ala	Glu	Phe	Ala 290	Val	Ala	Ala	Gly	Asp 295	Gln	Met	Leu	Tyr	Arg 300
Ser	Glu	Asp	Ile	Gln 305	Leu	Asp	Tyr	Lys	Asn 310	Asn	Ile	Leu	Lys	Glu 315
Arg	Ala	Glu	Leu	Ala 320	His	Ser	Pro	Leu	Pro 325	Ala	Lys	Tyr	Ile	Asp 330
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<211> 2243

<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Leu	Leu	Glu	Lys	Leu 35		Asp	Arg	Pro	Pro 40	Pro	Gly	Leu	Gln	Arg 45
Pro	Glu	Asp	Arg	Phe 50	Cys	Gly	Thr	Tyr	Ile 55	Ile	Phe	Phe	Ser	Leu 60
Gly	Ile	Gly	Ser	Leu 65	Leu	Pro	Trp	Asn	Phe 70	Phe	Ile	Thr	Ala	Lys 75

Glu Tyr Trp Met Phe Lys Leu Arg Asn Ser Ser Ser Pro Ala Thr 80 85 90

Gly Glu Asp Pro Glu Gly Ser Asp Ile Leu Asn Tyr Phe Glu Ser

Tyr Leu Ala Val Ala Ser Thr Val Pro Ser Met Leu Cys Leu Val 110 115 120

Ala Asn Phe Leu Leu Val Asn Arg Val Ala Val His Ile Arg Val
125 130 135

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Ala	Val	Thr	Ile	Val 170	Cys	Met	Val	Ile	Leu 175	Ser	Gly	Ala	Ser	Thr 180
Val	Phe	Ser	Ser	Ser 185	Ile	Tyr	Gly	Met	Thr 190	Gly	Ser	Phe	Pro	Met 195
Arg	Asn	Ser	Gln	Ala 200	Leu	Ile	Ser	Gly	Gly 205	Ala	Met	Gly	Gly	Thr 210
Val	Ser	Ala	Val	Ala 215	Ser	Leu	Val	Asp	Leu 220	Ala	Ala	Ser	Ser	Asp 225
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Cys	Gly	Arg	Gln	Leu 365	Thr	Ala	Trp	Ile	Gln 370	Val	Pro	Gly	Pro	Asn 375
Ser	Lys	Ala	Leu	Pro 380	Gly	Phe	Val	Leu	Leu 385	Arg	Thr	Cys	Leu	Ile 390
Pro	Leu	Phe	Val	Leu 395	Cys	Asn	Tyr	Gln	Pro 400	Arg	Val	His	Leu	Lys 405
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<211> 567

<212> PRT

<213> Homo sapiens

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Asp Pro Phe Glu Lys Cys Met Gln Asp Pro Asp Tyr Glu Gln Leu 35 40 45

Leu Lys Val Val Thr Trp Gly Leu Asn Arg Thr Leu Lys Pro Gln 50 55 60

Arg Val Ile Val Val Gly Ala Gly Val Ala Gly Leu Val Ala Ala 65 70 75

Lys Val Leu Ser Asp Ala Gly His Lys Val Thr Ile Leu Glu Ala 80 85 90

Asp Asn Arg Ile Gly Gly Arg Ile Phe Thr Tyr Arg Asp Gln Asn 95 100 105

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His Arg Ile Leu His Lys Leu Cys Gln Gly Leu Gly Leu Asn Leu 125 130 135

Thr Lys Phe Thr Gln Tyr Asp Lys Asn Thr Trp Thr Glu Val His
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Glu Val Lys Leu Arg Asn Tyr Val Val Glu Lys Val Pro Glu Lys 155 160 165

Leu Gly Tyr Ala Leu Arg Pro Gln Glu Lys Gly His Ser Pro Glu 170 175 180

Asp Ile Tyr Gln Met Ala Leu Asn Gln Ala Leu Lys Asp Leu Lys 185 190 195

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Val	Gln	Leu	Leu	Gly 230	Asp	Val	Met	Ser	Glu 235	Asp	Gly	Phe	Phe	Tyr 240
Leu	Ser	Phe	Ala	Glu 245	Ala	Leu	Arg	Ala	His 250	Ser	Cys	Leu	Ser	Asp 255
Arg	Leu	Gln	Tyr	Ser 260	Arg	Ile	Val	Gly	Gly 265	Trp	Asp	Leu	Leu	Pro 270
Arg	Ala	Leu	Leu	Ser 275	Ser	Leu	Ser	Gly	Leu 280	Val	Leu	Leu	Asn	Ala 285
Pro	Val	Val	Ala	Met 290	Thr	Gln	Gly	Pro	His 295	Asp	Val	His	Val	Gln 300
Ile	Glu	Thr	Ser	Pro 305	Pro	Ala	Arg	Asn	Leu 310	Lys	Val	Leu	Lys	Ala 315
Asp	Val	Val	Leu	Leu 320	Thr	Ala	Ser	Gly	Pro 325	Ala	Val	Lys	Arg	Ile 330
Thr	Phe	Ser	Pro	Pro 335	Leu	Pro	Arg	His	Met 340	Gln	Glu	Ala	Leu	Arg 345
Arg	Leu	His	Tyr	Val 350	Pro	Ala	Thr	Lys	Val 355	Phe	Leu	Ser	Phe	Arg 360
Arg	Pro	Phe	Trp	Arg 365	Glu	Glu	His	Ile	Glu 370	Gly	Gly	His	Ser	Asn 375
Thr	Asp	Arg	Pro	Ser 380	Arg	Met	Ile	Phe	Tyr 385	Pro	Pro	Pro	Arg	Glu 390
Gly	Ala	Leu	Leu	Leu 395	Ala	Ser	Tyr	Thr	Trp 400	Ser	Asp	Ala	Ala	Ala 405
Ala	Phe	Ala	Gly	Leu 410	Ser	Arg	Glu	Glu	Ala 415	Leu	Arg	Leu	Ala	Leu 420
Asp	Asp	Val	Ala	Ala 425	Leu	His	Gly	Pro	Val 430	Val	Arg	Gln	Leu	Trp 435
Asp	Gly	Thr	Gly	Val 440	Val	Lys	Arg	Trp	Ala 445	Glu	Asp	Gln	His	Ser 450
Gln	Gly	Gly	Phe	Val 455	Val	Gln	Pro	Pro	Ala 460	Leu	Trp	Gln	Thr	Glu 465
Lys	Asp	Asp	Trp	Thr 470	Val	Pro	Tyr	Gly	Arg 475	Ile	Tyr	Phe	Ala	Gly 480

Glu His Thr Ala Tyr Pro His Gly Trp Val Glu Thr Ala Val Lys 495

Ser Ala Leu Arg Ala Ala Ile Lys Ile Asn Ser Arg Lys Gly Pro 500

Ala Ser Asp Thr Ala Ser Pro Glu Gly His Ala Ser Asp Met Glu 525

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Leu Ala Lys Glu Glu Gly Ser His Pro Pro Val Gln Gly Gln Leu 555

Ser Leu Gln Asn Thr Thr His Thr Arg Thr Ser His

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<212> DNA

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Gly	Ile	Glu	Gly	Gly 110	Ala	Arg	Lys	Gly	Val 115	Ser	Gln	Lys	Asn	Asn 120
Asp	Leu	Thr	Ser	Cys 125	Cys	Phe	Ser	Asp	Ala 130	Lys	Thr	Met	Tyr	Glu 135
Val	Phe	Gln	Arg	Gly 140	Leu	Ala	Val	Ser	Asp 145	Asn	Gly	Pro	Cys	Leu 150
Gly	Tyr	Arg	Lys	Pro 155	Asn	Gln	Pro	Tyr	Arg 160	Trp	Leu	Ser	Tyr	Lys 165
Gln	Val	Ser	Asp	Arg 170	Ala	Glu	Tyr	Leu	Gly 175	Ser	Cys	Leu	Leu	His 180
Lys	Gly	Tyr	Lys	Ser 185	Ser	Pro	Asp	Gln	Phe 190	Val	Gly	Ile	Phe	Ala 195
Gln	Asn	Arg	Pro	Glu 200	Trp	Ile	Ile	Ser	Glu 205	Leu	Ala	Cys	Tyr	Thr 210
Tyr	Ser	Met	Val	Ala 215	Val	Pro	Leu	Tyr	Asp 220	Thr	Leu	Gly	Pro	Glu 225
Ala	Ile	Val	His	Ile 230	Val	Asn	Lys	Ala	Asp 235	Ile	Ala	Met	Val	Ile 240
Cys	Asp	Thr	Pro	Gln 245	Lys	Ala	Leu	Val	Leu 250	Ile	Gly	Asn	Val	Glu 255
Lys	Gly	Phe	Thr	Pro 260	Ser	Leu	Lys	Val	Ile 265	Ile	Leu	Met	Asp	Pro 270
Phe	Asp	Asp	Asp	Leu 275	Lys	Gln	Arg	Gly	Glu 280	Lys	Ser	Gly	Ile	Glu 285
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Leu	Pro	Leu	Ala	His 365	Met	Phe	Glu	Arg	Ile 370	Val	Gln	Ala	Val	Val 375
Tyr	Ser	Cys	Gly	Ala 380	Arg	Val	Gly	Phe	Phe 385	Gln	Gly	Asp	Ile	Arg 390
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Ala	Val	Pro	Arg	Leu 410	Leu	Asn	Arg	Ile	Tyr 415	Asp	Lys	Val	Gln	Asn 420
Glu	Ala	Lys	Thr	Pro 425	Leu	Lys	Lys	Phe	Leu 430	Leu	Lys	Leu	Ala	Val 435
Ser	Ser	Lys	Phe	Lys 440	Glu	Leu	Gln	Lys	Gly 445	Ile	Ile	Arg	His	Asp 450
Ser	Phe	Trp	Asp	Lys 455	Leu	Ile	Phe	Ala	Lys 460	Ile	Gln	Asp	Ser	Leu 465
Gly	Gly	Arg	Val	Arg 470	Val	Ile	Val	Thr	Gly 475	Ala	Ala	Pro	Met	Ser 480
Thr	Ser	Val	Met	Thr 485	Phe	Phe	Arg	Ala	Ala 490	Met	Gly	Cys	Gln	Val 495
Tyr	Glu	Ala	Tyr	Gly 500	Gln	Thr	Glu	Cys	Thr 505	Gly	Gly	Cys	Thr	Phe 510
Thr	Leu	Pro	Gly	Asp 515	Trp	Thr	Ser	Gly	His 520	Val	Gly	Val	Pro	Leu 525
Ala	Cys	Asn	Tyr	Val 530	Lys	Leu	Glu	Asp	Val 535	Ala	Asp	Met	Asn	Tyr 540
Phe	Thr	Val	Asn	Asn 545	Glu	Gly	Glu	Val	Cys 550	Ile	Lys	Gly	Thr	Asn 555
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Leu	Pro	Asn	Gly	Thr 590	Leu	Lys	Ile	Ile	Asp 595	Arg	Lys	Lys	Asn	Ile 600
Phe	Lys	Leu	Ala	Gln	Glv	Glu	Tyr	Ile	Ala	Pro	Glu	Lys	Ile	Glu

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Gly	Glu	Ser	Leu	Arg 635	Ser	Ser	Leu	Val	Gly 640	Val	Val	Val	Pro	Asp 645
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Ser	Phe	Glu	Glu	Leu 665	Cys	Gln	Asn	Gln	Val 670	Val	Arg	Glu	Ala	Ile 675
Leu	Glu	Asp	Leu	Gln 680	Lys	Ile	Gly	Lys	Glu 685	Ser	Gly	Leu	Lys	Thr 690
Phe	Glu	Gln	Val	Lys 695	Ala	Ile	Phe	Leu	His 700	Pro	Glu	Pro	Phe	Ser 705
Ile	Glu	Asn	Gly	Leu 710	Leu	Thr	Pro	Thr	Leu 715	Lys	Ala	Lys	Arg	Gly 720
Glu	Leu	Ser	Lys	Tyr 725	Phe	Arg	Thr	Gln	Ile 730	Asp	Ser	Leu	Tyr	Glu 735
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Phe Leu Leu Val Thr Val Ile Val Asn Ile Lys Leu Ile Leu Asp
50 55 60

Thr Arg Arg Ala Ile Ser Glu Ala Asn Glu Asp Pro Glu Pro Glu
65 7-0 75

Gln Asp Tyr Asp Glu Ala Leu Gly Arg Leu Glu Pro Pro Arg Arg
80 85 90

Arg Gly Ser Gly Pro Arg Arg Val Leu Asp Val Glu Val Tyr Ser 95 100 105

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Leu	Asn	Gln	Ala	Thr 140	Gly	His	Val	Met	Ala 145	Lys	Arg	Val	Phe	Asp 150
Thr	Tyr	Ser	Pro	His 155	Glu	Asp	Glu	Ala	Met 160	Val	Leu	Phe	Leu	Asn 165
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Pro	Ile	Glu	Phe	Ser 290	Pro	Asp	Pro	Leu	Pro 295	Asp	Asn	Lys	Val	Leu 300
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Tyr	Arg	Met	Leu	Arg 320	Ser	Leu	Leu	Ser	Ala 325	Gln	Gly	Val	Ser	Pro 330
Gln	Met	Ile	Thr	Val 335	Phe	Ile	Asp	Gly	Tyr 340	Tyr	Glu	Glu	Pro	Met 345
Asp	Val	Val	Ala	Leu 350	Phe	Gly	Leu	Arg	Gly 355	Ile	Gln	His	Thr	Pro 360
Ile	Ser	Ile	Lys	Asn 365	Ala	Arg	Val	Ser	Gln 370	His	Tyr	Lys	Ala	Ser 375
Leu	Thr	Ala	Thr	Phe 380	Asn	Leu	Phe	Pro	Glu 385	Ala	Lys	Phe	Ala	Val 390

Val	Leu	Glu	Glu	Asp 395	Leu	Asp	Ile	Ala	Val 400	Asp	Phe	Phe	Ser	Phe 405
Leu	Ser	Gln	Ser	Ile 410	His	Leu	Leu	Glu	Glu 415	Asp	Asp	Ser	Leu	Tyr 420
Cys	Ile	Ser	Ala	Trp 425	Asn	Asp	Gln	Gly	Tyr 430	Glu	His	Thr	Ala	Glu 435
Asp	Pro	Ala	Leu	Leu 440	Tyr	Arg	Val	Glu	Thr 445	Met	Pro	Gly	Leu	Gly 450
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Met	Pro	Glu	Gln	Arg 485	Arg	Gly	Arg	Glu	Cys 490	Ile	Ile	Pro	Asp	Val 495
Ser	Arg	Ser	Tyr	His 500	Phe	Gly	Ile	Val	Gly 505	Leu	Asn	Met	Asn	Gly 510
Tyr	Phe	His	Glu	Ala 515	Tyr	Phe	Lys	Lys	His 520	Lys	Phe	Asn	Thr	Val 525
Pro	Gly	Val	Gln	Leu 530	Arg	Asn	Val	Asp	Ser 535	Leu	Lys	Lys	Glu	Ala 540
Tyr	Glu	Val	Glu	Val 545	His	Arg	Leu	Leu	Ser 550	Glu	Ala	Glu	Val	Leu 555
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Arg	Lys	Lys	Asn	His 620	Phe	Leu	Val	Val	Gly 625	Val	Pro	Ala	Ser	Pro 630
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<211> 307

<212> PRT

<213> Homo sapiens

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Ser Glu Glu Arg Leu Lys Leu Val Thr Val Leu Gly Ala Gly Leu 35 40 45

Leu Cys Gly Thr Ala Leu Ala Val Ile Val Pro Glu Gly Val His
50 55 60

Ala Leu Tyr Glu Asp Ile Leu Glu Gly Lys His His Gln Ala Ser
65 70 75

Glu Thr His Asn Val Ile Ala Ser Asp Lys Ala Ala Glu Lys Ser 80 85 90

Val Val His Glu His Glu His Ser His Asp His Thr Gln Leu His
95 100 105

Ala Tyr Ile Gly Val Ser Leu Val Leu Gly Phe Val Phe Met Leu 110 115 120

Leu Val Asp Gln Ile Gly Asn Ser His Val His Ser Thr Asp Asp 125 130 135

Pro Glu Ala Ala Arg Ser Ser Asn Ser Lys Ile Thr Thr Leu 140 145 150

Gly Leu Val Val His Ala Ala Ala Asp Gly Val Ala Leu Gly Ala
155 160 160

Ala Ala Ser Thr Ser Gln Thr Ser Val Gln Leu Ile Val Phe Val
170 175 180

Ala Ile Met Leu His Lys Ala Pro Ala Ala Phe Gly Leu Val Ser 185 190 195

Phe Leu Met His Ala Gly Leu Glu Arg Asn Arg Ile Arg Lys His 200 205 210

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                                      220
 Tyr Leu Gly Leu Ser Lys Ser Ser Lys Glu Ala Leu Ser Glu Val
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                                      235
 Asn Ala Thr Gly Val Ala Met Leu Phe Ser Ala Gly Thr Phe Leu
                  245
                                      250
 Tyr Val Ala Thr Val His Val Leu Pro Glu Val Gly Gly Ile Gly
                 260
                                      265
                                                           270
 His Ser His Lys Pro Asp Ala Thr Gly Gly Arg Gly Leu Ser Arg
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 Leu Ser Val Gly His Gln His
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<210> 100

<211> 401

<212> PRT

<213> Homo sapiens

<400> 100

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35 40 45

Ile Met Glu Leu Glu Gly Arg Val Arg Arg Ala Ala Ala Glu Arg
50 55 60

Gly Ala Val Glu Leu Lys Lys Asn Glu Phe Gln Gly Glu Leu Glu
65 70 75

Lys Gln Arg Glu Gln Leu Asp Lys Ile Gln Ser Ser His Asn Phe 80 85 90

Gln Leu Glu Ser Val Asn Lys Leu Tyr Gln Asp Glu Lys Ala Val 95 100 105

Leu Val Asn Asn Ile Thr Thr Gly Glu Arg Leu Ile Arg Val Leu
110 115 120

Gln Asp Gln Leu Lys Thr Leu Gln Arg Asn Tyr Gly Arg Leu Gln
125 130 135

Gln Asp Val Leu Gln Phe Gln Lys Asn Gln Thr Asn Leu Glu Arg 140 145 150

Lys Phe Ser Tyr Asp Leu Ser Gln Cys Ile Asn Gln Met Lys Glu 155 160 165

Val Lys Glu Gln Cys Glu Glu Arg Ile Glu Glu Val Thr Lys Lys 170 175 180

Gly Asn Glu Ala Val Ala Ser Arg Asp Leu Ser Glu Asn Asn Asp 185 190 195

Gln Arg Gln Gln Leu Gln Ala Leu Ser Glu Pro Gln Pro Arg Leu
200 205 210

Gln Ala Ala Gly Leu Pro His Thr Glu Val Pro Gln Gly Lys Gly
215 220 225

Asn Val Leu Gly Asn Ser Lys Ser Gln Thr Pro Ala Pro Ser Ser

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Pro	Gln	Glu	Pro	Gly 275	Arg	Glu	Gln	Val	Val 280	Glu	Asp	Arg	Pro	Val 285
Gly	Gly	Arg	Gly	Phe 290	Gly	Gly	Ala	Gly	Glu 295	Leu	Gly	Gln	Thr	Pro 300
Gln	Val	Gln	Ala	Ala 305	Leu	Ser	Val	Ser	Gln 310	Glu	Asn	Pro	Glu	Met 315
Glu	Gly	Pro	Glu	Arg 320	Asp	Gln	Leu	Val	Ile 325	Pro	Asp	Gly	Gln	Glu 330
Glu	Glu	Gln	Glu	Ala 335	Ala	Gly	Glu	Gly	Arg 340	Asn	Gln	Gln	Lys	Leu 345
Arg	Gly	Glu	Asp	Asp 350	Tyr	Asn	Met	Asp	Glu 355	Asn	Glu	Ala	Glu	Ser 360
Glu	Thr	Asp	Lys	Gln 365	Ala	Ala	Leu	Ala	Gly 370	Asn	Asp	Arg	Asn	Ile 375
Asp	Val	Phe	Asn	Val 380	Glu	Asp	Gln	Lys	Arg 385	Asp	Thr	Ile	Asn	Leu 390
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<211> 1089

<212> PRT

<213> Homo sapiens

<400> 102

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Cys Trp Met Ala Ser Arg Phe Ser Arg Val Val Leu Val Leu Ile 65

Asp Ala Leu Arg Phe Asp Phe Ala Gln Pro Gln His Ser His Val

Pro Arg Glu Pro Pro Val Ser Leu Pro Phe Leu Gly Lys Leu Ser 100 105 95

Ser Leu Gln Arg Ile Leu Glu Ile Gln Pro His His Ala Arg Leu 120 115 110

Tyr Arg Ser Gln Val Asp Pro Pro Thr Thr Thr Met Gln Arg Leu 130 125

Lys Ala Leu Thr Thr Gly Ser Leu Pro Thr Phe Ile Asp Ala Gly 150 140

Ser Asn Phe Ala Ser His Ala Ile Val Glu Asp Asn Leu Ile Lys 155 160 165

Gln	Leu	Thr	Ser	Ala 170	Gly	Arg	Arg	Val	Val 175	Phe	Met	Gly	Asp	Asp 180
Thr	Trp	Lys	Asp	Leu 185	Phe	Pro	Gly	Ala	Phe 190	Ser	Lys	Ala	Phe	Phe 195
Phe	Pro	Ser	Phe	Asn 200	Val	Arg	Asp	Leu	Asp 205	Thr	Val	Asp	Asn	Gly 210
Ile	Leu	Glu	His	Leu 215	Tyr	Pro	Thr	Met	Asp 220	Ser	Gly	Glu	Trp	Asp 225
Val	Leu	Ile	Ala	His 230	Phe	Leu	Gly	Val	Asp 235	His	Cys	Gly	His	Lys 240
His	Gly	Pro	His	His 245	Pro	Glu	Met	Ala	Lys 250	Lys	Leu	Ser	Gln	Met 255
Asp	Gln	Val	Ile	Gln 260	Gly	Leu	Val	Glu	Arg 265	Leu	Glu	Asn	Asp	Thr 270
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His	Gly	Gly	Asp	Ser 290	Glu	Leu	Glu	Val	Ser 295	Ala	Ala	Leu	Phe	Leu 300
Tyr	Ser	Pro	Thr	Ala 305	Val	Phe	Pro	Ser	Thr 310	Pro	Pro	Glu	Glu	Pro 315
Glu	Val	Ile	Pro	Gln 320	Val	Ser	Leu	Val	Pro 325	Thr	Leu	Ala	Leu	Leu 330
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Glu	Leu	Phe	Ser	Gly 350	Gly	Glu	Asp	Ser	Gln 355	Pro	His	Ser	Ser	Ala 360
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Arg	Phe	Leu	His	Thr 380	Tyr	Ser	Ala	Ala	Thr 385	Gln	Asp	Leu	Gln	Ala 390
Lys	Glu	Leu	His	Gln 395	Leu	Gln	Asn	Leu	Phe 400	Ser	Lys	Ala	Ser	Ala 405
Asp	Tyr	Gln	Trp	Leu 410	Leu	Gln	Ser	Pro	Lys 415	Gly	Ala	Glu	Ala	Thr 420
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Arg	Ala	Met	Cys	Ile 440	Glu	Ser	Trp	Ala	Arg 445	Phe	Ser	Leu	Val	Arg 450

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L	eu	Leu	Ala	Ser	Gln 470	Trp	Ala	Ile	Ser	Pro 475	Gly	Phe	Pro	Phe	Cys 480
P	ro	Leu	Leu	Leu	Thr 485	Pro	Val	Ala	Trp	Gly 490	Leu	Val	Gly	Ala	Ile 495
A	la	Tyr	Ala	Gly	Leu 500	Leu	Gly	Thr	Ile	Glu 505	Leu	Lys	Leu	Asp	Leu 510
V	al	Leu	Leu	Gly	Ala 515	Val	Ala	Ala	Val	Ser 520	Ser	Phe	Leu	Pro	Phe 525
L	eu	Trp	Lys	Ala	Trp 530	Ala	Gly	Trp	Gly	Ser 535	Lys	Arg	Pro	Leu	Ala 540
T)	hr	Leu	Phe	Pro	Ile 545	Pro	Gly	Pro	Val	Leu 550	Leu	Leu	Leu	Leu	Phe 555
A:	rg	Leu	Ala	Val	Phe 560	Phe	Ser	Asp	Ser	Phe 565	Val	Val	Ala	Glu	Ala 570
A:	rg	Ala	Thr	Pro	Phe 575	Leu	Leu	Gly	Ser	Phe 580	Ile	Leu	Leu	Leu	Val 585
V	al	Gln	Leu	His	Trp 590	Glu	Gly	Gln	Leu	Leu 595	Pro	Pro	Lys	Leu	Leu 600
T	hr	Met	Pro	Arg	Leu 605	Gly	Thr	Ser	Ala	Thr 610	Thr	Asn	Pro	Pro	Arg 615
Н:	is	Asn	Gly	Ala	Tyr 620	Ala	Leu	Arg	Leu	Gly 625	Ile	Gly	Leu	Leu	Leu 630
C	ys	Thr	Arg	Leu	Ala 635	Gly	Leu	Phe	His	Arg 640	Cys	Pro	Glu	Glu	Thr 645
P	ro	Val	Cys	His	Ser 650	Ser	Pro	Trp	Leu	Ser 655	Pro	Leu	Ala	Ser	Met 660
Vá	al	Gly	Gly	Arg	Ala 665	Lys	Asn	Leu	Trp	Tyr 670	Gly	Ala	Cys	Val	Ala 675
A	la	Leu	Val	Ala	Leu 680	Leu	Ala	Ala	Val	Arg 685	Leu	Trp	Leu	Arg	Arg 690
Ty	yr	Gly	Asn	Leu	Lys 695	Ser	Pro	Glu	Pro	Pro 700	Met	Leu	Phe	Val	Arg 705
Т	rp	Gly	Leu	Pro	Leu 710	Met	Ala	Leu	Gly	Thr 715	Ala	Ala	Tyr	Trp	Ala 720
Le	eu	Ala	Ser	Gly	Ala 725	Asp	Glu	Ala	Pro	Pro 730	Arg	Leu	Arg	Val	Leu 735

Val	Ser	Gly	Ala	Ser 740	Met	Val	Leu	Pro	Arg 745	Ala	Val	Ala	Gly	Leu 750
Ala	Ala	Ser	Gly	Leu 755	Ala	Leu	Leu	Leu	Trp 760	Lys	Pro	Val	Thr	Val 765
Leu	Val	Lys	Ala	Gly 770	Ala	Gly	Ala	Pro	Arg 775	Thr	Arg	Thr	Val	Leu 780
Thr	Pro	Phe	Ser	Gly 785	Pro	Pro	Thr	Ser	Gln 790	Ala	Asp	Leu	Asp	Tyr 795
Val	Val	Pro	Gln	Ile 800	Tyr	Arg	His	Met	Gln 805	Glu	Glu	Phe	Arg	Gly 810
Arg	Leu	Glu	Arg	Thr 815	Lys	Ser	Gln	Gly	Pro 820	Leu	Thr	Val	Ala	Ala 825
Tyr	Gln	Leu	Gly	Ser 830	Val	Tyr	Ser	Ala	Ala 835	Met	Val	Thr	Ala	Leu 840
Thr	Leu	Leu	Ala	Phe 845	Pro	Leu	Leu	Leu	Leu 850	His	Ala	Glu	Arg	Ile 855
Ser	Leu	Val	Phe	Leu 860	Leu	Leu	Phe	Leu	Gln 865	Ser	Phe	Leu	Leu	Leu 870
His	Leu	Leu	Ala	Ala 875	Gly	Ile	Pro	Val	Thr 880	Thr	Pro	Gly	Pro	Phe 885
Thr	Val	Pro	Trp	Gln 890	Ala	Val	Ser	Ala	Trp 895	Ala	Leu	Met	Ala	Thr 900
Gln	Thr	Phe	Tyr	Ser 905	Thr	Gly	His	Gln	Pro 910	Val	Phe	Pro	Ala	Ile 915
His	Trp	His	Ala	Ala 920	Phe	Val	Gly	Phe	Pro 925	Glu	Gly	His	Gly	Ser 930
Cys	Thr	Trp	Leu	Pro 935	Ala	Leu	Leu	Val	Gly 940	Ala	Asn	Thr	Phe	Ala 945
Ser	His	Leu	Leu	Phe 950	Ala	Val	Gly	Cys	Pro 955	Leu	Leu	Leu	Leu	Trp 960
Pro	Phe	Leu	Cys	Glu 965	Ser	Gln	Gly	Leu	Arg 970	Lys	Arg	Gln	Gln	Pro 975
Pro	Gly	Asn	Glu	Ala 980	Asp	Ala	Arg	Val	Arg 985	Pro	Glu	Glu	Glu	Glu 990
Glu	Pro	Leu	Met	Glu 995	Met	Arg	Leu		Asp 1000	Ala	Pro	Gln	His 1	Phe 1005
Tyr	Ala	Ala		Leu 1010	Gln	Leu	Gly		Lys 1015	Tyr	Leu	Phe	Ile 1	Leu 1020

Gly Ile Gln Ile Leu Ala Cys Ala Leu Ala Ala Ser Ile Leu Arg 1025 1030 1035

Arg His Leu Met Val Trp Lys Val Phe Ala Pro Lys Phe Ile Phe 1040 1045 1050

Glu Ala Val Gly Phe Ile Val Ser Ser Val Gly Leu Leu Gly 1055 1060 1065

Ile Ala Leu Val Met Arg Val Asp Gly Ala Val Ser Ser Trp Phe 1070 1075 1080

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<211> 442

<212> PRT

<213> Homo sapiens

<400> 104

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Leu Leu Thr Leu Cys Ser Ile Ser Ser Gln Ile Gly Pro Pro Glu 20 25 30

Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr
35 40 45

Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser

Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu 65 70 75

Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His 80 85 90

Thr	Leu	Val	Leu	Thr 95	Trp	Leu	Glu	Pro	Asn 100	Thr	Leu	Tyr	Cys	Val 105
His	Val	Glu	Ser	Phe 110	Val	Pro	Gly	Pro	Pro 115	Arg	Arg	Ala	Gln	Pro 120
Ser	Glu	Lys	Gln	Cys 125	Ala	Arg	Thr	Leu	Lys 130	Asp	Gln	Ser	Ser	Glu 135
Phe	Lys	Ala	Lys	Ile 140	Ile	Phe	Trp	Tyr	Val 145	Leu	Pro	Ile	Ser	Ile 150
Thr	Val	Phe	Leu	Phe 155	Ser	Val	Met	Gly	Tyr 160	Ser	Ile	Tyr	Arg	Tyr 165
Ile	His	Val	Gly	Lys 170	Glu	Lys	His	Pro	Ala 175	Asn	Leu	Ile	Leu	Ile 180
Tyr	Gly	Asn	Glu	Phe 185	Asp	Lys	Arg	Phe	Phe 190	Val	Pro	Ala	Glu	Lys 195
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Ile	Ser	His	Gln	Asp 215	Met	Ser	Leu	Leu	Gly 220	Lys	Ser	Ser	Asp	Val 225
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Gln	Glu	Glu	Glu	Glu 245	Val	Lys	His	Leu	Gly 250	Tyr	Ala	Ser	His	Leu 255
Met	Glu	Ile	Phe	Cys 260	Asp	Ser	Glu	Glu	Asn 265	Thr	Glu	Gly	Thr	Ser 270
Leu	Thr	Gln	Gln	Glu 275	Ser	Leu	Ser	Arg	Thr 280	Ile	Pro	Pro	Asp	Lys 285
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Ala	Gly	Pro	Glu	Glu 305	Gln	Glu	Leu	Ser	Leu 310	Gln	Glu	Glu	Val	Ser 315
Thr	Gln	Gly	Thr	Leu 320	Leu	Glu	Ser	Gln	Ala 325	Ala	Leu	Ala	Val	Leu 330
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Leu	Asp	Pro	Leu	Ala 350	Gln	Glu	His	Thr	Asp 355	Ser	Glu	Glu	Gly	Pro 360
Glu	Glu	Glu	Pro	Ser 365	Thr	Thr	Leu	Val	Asp 370	Trp	Asp	Pro	Gln	Thr 375

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<210> 111 <211> 283 <212> PRT

<213> Homo sapiens

<400> 111

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Ala Thr Ala Leu Met Leu Pro Val Lys Pro Pro Ala Gly Ser Trp
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Gly Ala Gln Ile Ile Gly Gly His Glu Val Thr Pro His Ser Arg
35 40 45

Pro Tyr Met Ala Ser Val Arg Phe Gly Gly Gln His His Cys Gly 50 55 60

Gly Phe Leu Leu Arg Ala Arg Trp Val Val Ser Ala Ala His Cys
65 70 75

Phe Ser His Arg Asp Leu Arg Thr Gly Leu Val Val Leu Gly Ala 80 85 90

His Val Leu Ser Thr Ala Glu Pro Thr Gln Gln Val Phe Gly Ile 95 100 105

Asp Ala Leu Thr Thr His Pro Asp Tyr His Pro Met Thr His Ala 110 115 120

Asn Asp Ile Cys Leu Leu Arg Leu Asn Gly Ser Ala Val Leu Gly
125 130 135

Pro Ala Val Gly Leu Leu Arg Leu Pro Gly Arg Arg Ala Arg Pro 140 145 150

Pro Thr Ala Gly Thr Arg Cys Arg Val Ala Gly Trp Gly Phe Val 155 160 165

Ser Asp Phe Glu Glu Leu Pro Pro Gly Leu Met Glu Ala Lys Val

Arg Val Leu Asp Pro Asp Val Cys Asn Ser Ser Trp Lys Gly His 185 190 195

Leu Thr Leu Thr Met Leu Cys Thr Arg Ser Gly Asp Ser His Arg

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 Asp Pro Lys Thr Pro Asp Val Tyr Thr Gln Val Ser Ala Phe Val
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<211> 331

<212> PRT

<213> Homo sapiens

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Pro Ser Lys Ala Thr Ile Pro Gly Lys Thr Val Ile Val Thr Gly 35 40 45

Ala Asn Thr Gly Ile Gly Lys Gln Thr Ala Leu Glu Leu Ala Arg
50 55 60

Arg Gly Gly Asn Ile Ile Leu Ala Cys Arg Asp Met Glu Lys Cys
65 70 75

Glu Ala Ala Ala Lys Asp Ile Arg Gly Glu Thr Leu Asn His His $80 \hspace{1cm} 85 \hspace{1cm} 90$

Val Asn Ala Arg His Leu Asp Leu Ala Ser Leu Lys Ser Ile Arg 95 100 105

Glu Phe Ala Ala Lys Ile Ile Glu Glu Glu Glu Arg Val Asp Ile 110 115 120

Leu Ile Asn Asn Ala Gly Val Met Arg Cys Pro His Trp Thr Thr 125 130 135

Glu Asp Gly Phe Glu Met Gln Phe Gly Val Asn His Leu Gly His 140 145 150

Phe Leu Leu Thr Asn Leu Leu Leu Asp Lys Leu Lys Ala Ser Ala 155 160 165

Pro Ser Arg Ile Ile Asn Leu Ser Ser Leu Ala His Val Ala Gly 170 175 180

His	Ile	Asp	Phe	Asp 185	Asp	Leu	Asn	Trp	Gln 190	Thr	Arg	Lys	Tyr	Asn 195
Thr	Lys	Ala	Ala	Tyr 200	Cys	Gln	Ser	Lys	Leu 205	Ala	Ile	Val	Leu	Phe 210
Thr	Lys	Glu	Leu	Ser 215	Arg	Arg	Leu	Gln	Gly 220	Ser	Gly	Val	Thr	Val 225
Asn	Ala	Leu	His	Pro 230	Gly	Val	Ala	Arg	Thr 235	Glu	Leu	Gly	Arg	His 240
Thr	Gly	Ile	His	Gly 245	Ser	Thr	Phe	Ser	Ser 250	Thr	Thr	Leu	Gľy	Pro 255
Ile	Phe	Trp	Leu	Leu 260	Val	Lys	Ser	Pro	Glu 265	Leu	Ala	Ala	Gln	Pro 270
Ser	Thr	Tyr	Leu	Ala 275	Val	Ala	Glu	Glu	Leu 280	Ala	Asp	Val	Ser	Gly 285
Lys	Tyr	Phe	Asp	Gly 290	Leu	Lys	Gln	Lys	Ala 295	Pro	Ala	Pro	Glu	Ala 300
Glu	Asp	Glu	Glu	Val 305	Ala	Arg	Arg	Leu	Trp 310	Ala	Glu	Ser	Ala	Arg 315
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Arg

<210> 117 <211> 2249 <212> DNA <213> Homo sapiens

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<210> 118

<211> 544

<212> PRT

<213> Homo sapiens

<400> 118

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Leu Gly Thr Gly Asp Pro Glu Arg Ala Ala Ala Arg Gly Asp Thr 20 25 30

Phe Ser Ala Leu Thr Ser Val Ala Arg Ala Leu Ala Pro Glu Arg
35 40 45

Arg Leu Leu Gly Leu Leu Arg Arg Tyr Leu Arg Gly Glu Glu Ala 50 55 60

Arg Leu Arg Asp Leu Thr Arg Phe Tyr Asp Lys Val Leu Ser Leu
65 70 75

His Glu Asp Ser Thr Thr Pro Val Ala Asn Pro Leu Leu Ala Phe 80 85 90

Thr Leu Ile Lys Arg Leu Gln Ser Asp Trp Arg Asn Val Val His
95 100 105

Ser Leu Glu Ala Ser Glu Asn Ile Arg Ala Leu Lys Asp Gly Tyr 110 115 120

Glu Lys Val Glu Gln Asp Leu Pro Ala Phe Glu Asp Leu Glu Gly
125 130 135

Ala Ala Arg Ala Leu Met Arg Leu Gln Asp Val Tyr Met Leu Asn 140 145 150

Val Lys Gly Leu Ala Arg Gly Val Phe Gln Arg Val Thr Gly Ser 155 160 165

Ala Ile Thr Asp Leu Tyr Ser Pro Lys Arg Leu Phe Ser Leu Thr 170 175 180

Gly	Asp	Asp	Cys	Phe 185	Gln	Val	Gly	Lys	Val 190	Ala	Tyr	Asp	Met	Gly 195
Asp	Tyr	Tyr	His	Ala 200	Ile	Pro	Trp	Leu	Glu 205	Glu	Ala	Val	Ser	Leu 210
Phe	Arg	Gly	Ser	Tyr 215	Gly	Glu	Trp	Lys	Thr 220	Glu	Asp	Glu	Ala	Ser 225
Leu	Glu	Asp	Ala	Leu 230	Asp	His	Leu	Ala	Phe 235	Ala	Tyr	Phe	Arg	Ala 240
Gly	Asn.	Val	Ser	Cys 245	Ala	Leu	Ser	Leu	Ser 250	Arg	Glu	Phe	Leu	Leu 255
Tyr	Ser	Pro	Asp	Asn 260	Lys	Arg	Met	Ala	Arg 265	Asn	Val	Leu	Lys	Tyr 270
Glu	Arg	Leu	Leu	Ala 275	Glu	Ser	Pro	Asn	His 280	Val	Val	Ala	Glu	Ala 285
Val	Ile	Gln	Arg	Pro 290	Asn	Ile	Pro	His	Leu 295	Gln	Thr	Arg	Asp	Thr 300
Tyr	Glu	Gly	Leu	Cys 305	Gln	Thr	Leu	Gly	Ser 310	Gln	Pro	Thr	Leu	Tyr 315
Gln	Ile	Pro	Ser	Leu 320	Tyr	Cys	Ser	Tyr	Glu 325	Thr	Asn	Ser	Asn	Ala 330
Tyr	Leu	Leu	Leu	Gln 335	Pro	Ile	Arg	Lys	Glu 340	Val	Ile	His	Leu	Glu 345
Pro	Tyr	Ile	Ala	Leu 350	Tyr	His	Asp	Phe	Val 355	Ser	Asp	Ser	Glu	Ala 360
Gln	Lys	Ile	Arg	Glu 365	Leu	Ala	Glu	Pro	Trp 370	Leu	Gln	Arg	Ser	Val 375
Val	Ala	Ser	Gly	Glu 380	Lys	Gln	Leu	Gln	Val 385	Glu	Tyr	Arg	Ile	Ser 390
Lys	Ser	Ala	Trp	Leu 395	Lys	Asp	Thr	Val	Asp 400	Pro	Lys	Leu	Val	Thr 405
Leu	Asn	His	Arg	Ile 410	Ala	Ala	Leu	Thr	Gly 415	Leu	Asp	Val	Arg	Pro 420
Pro	Tyr	Ala	Glu	Tyr 425	Leu	Gln	Val	Val	Asn 430	Tyr	Gly	Ile	Gly	Gly 435
His	Tyr	Glu	Pro	His 440	Phe	Asp	His	Ala	Thr 445	Ser	Pro	Ser	Ser	Pro 450
Leu	Tyr	Arg	Met	Lys 455	Ser	Gly	Asn	Arg	Val 460	Ala	Thr	Phe	Met	Ile 465

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                 470
 Ala Asn Leu Ser Val Pro Val Val Arg Asn Ala Ala Leu Phe Trp
                                      490
                 485
 Trp Asn Leu His Arg Ser Gly Glu Gly Asp Ser Asp Thr Leu His
 Ala Gly Cys Pro Val Leu Val Gly Asp Lys Trp Val Ala Asn Lys
                                      520
                 515
 Trp Ile His Glu Tyr Gly Gln Glu Phe Arg Arg Pro Cys Ser Ser
                 530
                                      535
 Ser Pro Glu Asp
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<211> 23
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<223> Synthetic oligonucleotide probe
<400> 119
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<210> 121
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<400> 121
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<210> 122
<211> 1778
<212> DNA
<213> Homo sapiens
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<210> 123

<211> 294

<212> PRT

<213> Homo sapiens

<400> 123

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Ser Tyr Leu Trp Leu Lys Phe Ser Leu Ile Ile Tyr Ser Thr Val 20 25 30

Phe Trp Leu Ile Gly Ala Leu Val Leu Ser Val Gly Ile Tyr Ala 35 40 45

Glu Val Glu Arg Gln Lys Tyr Lys Thr Leu Glu Ser Ala Phe Leu
50 : 55 60

Ala Pro Ala Ile Ile Leu Ile Leu Leu Gly Val Val Met Phe Met 65 70 75

Val Ser Phe Ile Gly Val Leu Ala Ser Leu Arg Asp Asn Leu Tyr 80 85 90

Leu Leu Gln Ala Phe Met Tyr Ile Leu Gly Ile Cys Leu Ile Met 95 100 105

Glu Leu Ile Gly Gly Val Val Ala Leu Thr Phe Arg Asn Gln Thr 110 115 120

Ile Asp Phe Leu Asn Asp Asn Ile Arg Arg Gly Ile Glu Asn Tyr 125 130 135

Tyr Asp Asp Leu Asp Phe Lys Asn Ile Met Asp Phe Val Gln Lys

Lys Phe Lys Cys Cys Gly Gly Glu Asp Tyr Arg Asp Trp Ser Lys 155 160 165

Asn Gln Tyr His Asp Cys Ser Ala Pro Gly Pro Leu Ala Cys Gly

				170					175					180
Val	Pro	Tyr	Thr	Cys 185	Суз	Ile	Arg	Asn	Thr 190	Thr	Glu	Val	Val	Asn 195
Thr	Met	Cys	Gly	Tyr 200	Lys	Thr	Ile	Asp	Lys 205	Glu	Arg	Phe	Ser	Val 210
Gln	Asp	Val	Ile	Tyr 215	Val	Arg	Gly	Cys	Thr 220	Asn	Ala	Val	Ile	Ile 225
Trp	Phe	Met	Asp	Asn 230	Tyr	Thr	Ile	Met	Ala 235	Суз	Ile	Leu	Leu	Gly 240
Ile	Leu	Leu	Pro	Gln 245	Phe	Leu	Gly	Val	Leu 250	Leu	Thr	Leu	Leu	Tyr 255
Ile	Thr	Arg	Val	Glu 260	Asp	Ile	Ile	Met	Glu 265	His	Ser	Val	Thr	Asp 270
Gly	Leu	Leu	Gly	Pro 275	Gly	Ala	Lys	Pro	Ser 280	Val	Glu	Ala	Ala	Gly 285
Thr	Gly	Суѕ	Cys	Leu 290	Cys	Tyr	Pro	Asn		ů.				
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<210> 127

<211> 1636

<212> DNA

<213> Homo sapiens

<400> 127

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accaacttat actcaacttg aataacatca getetgateg gatecagetg 1300 atgaactetg ggattggetg gttecaacet gatgttetga aaaacatcat 1350 cactgagate atccaeteca teetgetgee gaaccagaat ggeaaattaa 1400 gatetggggt eecagtgtea ttggtgaagg eettgggatt egaggeaget 1450 gagteeteae tgaccaagga tgeeettgtg ettaeteeag eeteettgtg 1500 gaaacceage teteetgtet eecagtgaag acttggatgg eageeateag 1550 ggaaggetgg gteecagetg ggagtatggg tgtgagetet atagaccate 1600 eeteetetgea atcaataaac acttgeetgt gaaaaa 1636

<210> 128

<211> 484

<212> PRT

<213> Homo sapiens

<400> 128

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35 40 45

Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser 50 55 60

Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser 65 70 75

Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile 80 85 90

Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp 95 100 105

Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe 110 115 120

Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr

Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro 140 145 150

Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser His Gly Ser Leu 155 160 165

Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu

				170	-				175					180
Ala	Lys	Gln	Val	Met 185	Asn	Leu	Leu	Val	Pro 190	Ser	Leu	Pro	Asn	Leu 195
Val	Lys	Asn	Gln	Leu 200	Суз	Pro	Val	Ile	Glu 205	Ala	Ser	Phe	Asn	Gly 210
Met	Tyr	Ala	Asp	Leu 215	Leu	Gln	Leu	Val	Lys 220	Val	Pro	Ile	Ser	Leu 225
Ser	Ile	Asp	Arg	Leu 230	Glu	Phe	Asp	Leu	Leu 235	Tyr	Pro	Ala	Ile	Lys 240
Gly	Asp	Thr	Ile	Gln 245	Leu	Tyr	Leu	Gly	Ala 250	Lys	Leu	Leu	Asp	Ser 255
Gln	Gly	Lys	Val	Thr 260	Lys	Trp	Phe	Asn	Asn 265	Ser	Ala	Ala	Ser	Leu 270
Thr	Met	Pro	Thr	Leu 275	Asp	Asn	Ile	Pro	Phe 280	Ser	Leu	Ile	Val	Ser 285
Gln	Asp	Val	Val	Lys 290	Ala	Ala	Val	Ala	Ala 295	Val	Leu	Ser	Pro	Glu 300
Glu	Phe	Met	Val	Leu 305	Leu	Asp	Ser	Val	Leu 310	Pro	Glu	Ser	Ala	His 315
Arg	Leu	Lys	Ser	Ser 320	Ile	Gly	Leu	Ile	Asn 325	Glu	Lys	Ala	Ala	Asp 330
Lys	Leu	Gly	Ser	Thr 335	Gln	Ile	Val	Lys	Ile 340	Leu	Thr	Gln	Asp	Thr 345
Pro	Glu	Phe	Phe	Ile 350	Asp	Gln	Gly	His	Ala 355	Lys	Val	Ala	Gln	Leu 360
Ile	Val	Leu	Glu	Val 365	Phe	Pro	Ser	Ser	Glu 370	Ala	Leu	Arg	Pro	Leu 375
Phe	Thr	Leu	Gly	Ile 380	Glu	Ala	Ser	Ser	Glu 385	Ala	Gln	Phe	Tyr	Thr 390
Lys	Gly	Asp	Gln	Leu 395	Ile	Leu	Asn	Leu	Asn 400	Asn	Ile	Ser	Ser	Asp 405
Arg	Ile	Gln	Leu	Met 410	Asn	Ser	Gly	Ile	Gly 415	Trp	Phe	Gln	Pro	Asp 420
Val	Leu	Lys	Asn	Ile 425	Ile	Thr	Glu	Ile	Ile 430	His	Ser	Ile	Leu	Leu 435
Pro	Asn	Gln	Asn	Gly 440	Lys	Leu	Arg	Ser	Gly 445	Val	Pro	Val	Ser	Leu 450
Val	Lys	Ala	Leu	Gly	Phe	Glu	Ala	Ala	Glu	Ser	Ser	Leu	Thr	Lys

455 460 465

Asp Ala Leu Val Leu Thr Pro Ala Ser Leu Trp Lys Pro Ser Ser 470 , 475 480

Pro Val Ser Gln

<210> 129

<211> 2213

<212> DNA

<213> Homo sapiens

<400> 129

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<210> 130

<211> 335

<212> PRT

<213> Homo sapiens

<400> 130

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	20					25					30
Arg Lys Lys	Glu Met		Leu	Ser	Glu	Lys 40	Val	Ser	Gln	Leu	Met 45
Glu Trp Thr	Asn Lys		Pro	Val	Ile	Arg 55	Met	Asn	Gly	Asp	Lys 60
Phe Arg Arg	Leu Val	_	Ala	Pro	Pro	Arg 70	Asn	Tyr	Ser	Val	Ile 75
Val Met Phe	Thr Ala		Gln	Leu	His	Arg 85	Gln	Cys	Val	Val	Cys 90
Lys Gln Ala	Asp Glu		Phe	Gln	Ile	Leu 100	Ala	Asn	Ser	Trp	Arg 105
Tyr Ser Ser	Ala Phe		Asn	Arg	Ile	Phe 115	Phe	Ala	Met	Val	Asp 120
Phe Asp Glu	Gly Ser 125		Val	Phe	Gln	Met 130	Leu	Asn	Met	Asn ;	Ser 135
Ala Pro Thr	Phe Ile		Phe	Pro	Ala	Lys 145	Gly	Lys	Pro	Lys	Arg 150
Gly Asp Thr	Tyr Glu 155		Gln	Val	Arg	Gly 160	Phe	Ser	Ala	Glu	Gln 165
Ile Ala Arg	Trp Ile		Asp	Arg	Thr	Asp 175	Val	Asn	Ile	Arg	Val 180
Ile Arg Pro	Pro Asn 185		Ala	Gly	Pro	Leu 190	Met	Leu	Gly	Leu	Leu 195
Leu Ala Val	Ile Gly 200	_	Leu	Val	Tyr	Leu 205	Arg	Arg	Ser	Asn	Met 210
Glu Phe Leu	Phe Asn 215		Thr	Gly	Trp	Ala 220	Phe	Ala	Ala	Leu	Cys 225
Phe Val Leu	Ala Met 230		Ser	Gly	Gln	Met 235	Trp	Asn	His	Ile	Arg 240
Gly Pro Pro	Tyr Ala 245		Lys	Asn	Pro	His 250	Thr	Gly	His	Val	Asn 255
Tyr Ile His	Gly Ser 260		Gln	Ala	Gln	Phe 265	Val	Ala	Glu	Thr	His 270
Ile Val Leu	Leu Phe 275		Gly	Gly	Val	Thr 280	Leu	Gly	Met	Val	Leu 285
Leu Cys Glu	Ala Ala 290		Ser	Asp	Met	Asp 295	Ile	Gly	Lys	Arg	Lys 300
Ile Met Cys	Val Ala	Gly	Ile	Gly	Leu	Val	Val	Leu	Phe	Phe	Ser

305 / 310 315

Trp Met Leu Ser Ile Phe Arg Ser Lys Tyr His Gly Tyr Pro Tyr 320 325 330

Ser Phe Leu Met Ser

<210> 131

<211> 2476

<212> DNA

<213> Homo sapiens

<400> 131

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Ala	Pro	Asn	Val	Val 35	Leu	Val	Val	Ser	Asp 40	Ser	Phe	Asp	Gly	Arq 45
Leu	Thr	Phe	His	Pro 50	Gly	Ser	Gln	Val	Val 55	Lys	Ļeu	Pro	Phe	Ile 60
Asn	Phe	Met	Lys	Thr 65	Arg	Gly	Thr	Ser	Phe 70	Leu	Asn	Ala	Tyr	Th:
Asn	Ser	Pro	Ile	Cys 80	Cys	Pro	Ser	Arg	Ala 85	Ala	Met	Trp	Ser	Gl ₂ 90
Leu	Phe	Thr	His	Leu 95	Thr	Glu	Ser	Trp	Asn 100	Asn	Phe	Lys	Gly	Le:
Asp	Pro	Asn	Tyr	Thr 110	Thr	Trp	Met	Asp	Val 115	Met	Glu	Arg	His	Gly 120
Tyr	Arg	Thr	Gln	Lys 125	Phe	Gly	Lys	Leu	Asp 130	Tyr	Thr	Ser	Gly	His 135
His	Ser	Ile	Ser	Asn 140	Arg	Val	Glu	Ala	Trp 145	Thr	Arg	Asp	Val	Ala 150
Phe	Leu	Leu	Arg	Gln 155	Glu	Gly	Arg	Pro	Met 160	Val	Asn	Leu	Ile	Arg 165
Așn	Arg	Thr	Lys					Glu			Trp	Gln	Asn	Th:
Asp	Lys	Ala	Val	Asn 185	Trp	Leu	Arg	Lys	Glu 190	Ala	Ile	Asn	Tyr	Th: 195
Glu	Pro	Phe	Val	Ile 200	Tyr	Leu	Gly	Leu	Asn 205	Leu	Pro	His	Pro	Туг 210
Pro	Ser	Pro	Ser	Ser 215	Gly	Glu	Asn	Phe	Gly 220	Ser	Ser	Thr	Phe	His 225
Thr	Ser	Leu	Tyr	Trp 230	Leu	Glu	Lys	Val	Ser 235	His	Asp	Ala	Ile	Lys 240
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<210> 132

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Thr	Asp	Ala	Met	Leu 290	Gly	Glu	Ile	Ile	Leu 295	Ala	Leu	His	Gln	Leu 300
Asp	Leu	Leu	Gln	Lys 305	Thr	Ile	Val	Ile	Tyr 310	Ser	Ser	Asp	His	Gly 315
Glu	Leu	Ala	Met	Glu 320	His	Arg	Gln	Phe	Tyr 325	Lys	Met	Ser	Met	Tyr 330
Glu	Ala	Ser	Ala	His 335	Val	Pro	Leu	Leu	Met ·340	Met	Gly	Pro	Gly	Ile 345
Lys	Ala	Gly	Leu	Gln 350	Val	Ser	Asn	Val	Val 355	Ser	Leu	Val	Asp	Ile 360
Tyr	Pro	Thr	Met	Leu 365	Asp	Ile	Ala	Gly	Ile 370	Pro	Leu	Pro	Gln	Asn 375
Leu	Ser	Gly	Tyr	Ser 380	Leu	Leu	Pro	Leu	Ser 385	Ser	Glu	Thr	Phe	Lys 390
Asn	Glu	His	Lys	Val 395	Lys	Asn	Leu	His	Pro 400	Pro	Trp	Ile	Leu	Ser 405
Glu	Phe	His	Gly	Cys 410	Asn	Val	Asn	Ala	Ser 415	Thr	Tyr	Met	Leu	Arg 420
Thr	Asn	His	Trp	Lys 425	Tyr	Ile	Ala	Tyr	Ser 430	Asp	Gly	Ala	Ser	Ile 435
Leu	Pro	Gln	Leu	Phe 440	Asp	Leu	Ser	Ser	Asp 445	Pro	Asp	Glu	Leu	Thr 450
Asn	Val	Ala	Val	Lys 455	Phe	Pro	Glu	Ile	Thr 460	Tyr	Ser	Leu	Asp	Gln 465
Lys	Leu	His	Ser	Ile 470	Ile	Asn	Tyr	Pro	Lys 475	Val	Ser	Ala	Ser	Val 480
His	Gln	Tyr	Asn	Lys 485	Glu	Gln	Phe	Ile	Lys 490		Lys	Gln	Ser	Ile 495
Gly	Gln	Asn	Tyr	Ser 500	Asn	Val	Ile	Ala	Asn 505	Leu	Arg	Trp	His	Gln 510
Asp	Trp	Gln	Lys	Glu 515	Pro	Arg	Lys	Tyr	Glu 520	Asn	Ala	Ile	Asp	Gln 525
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<210> 133
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<211> 1475

<212> DNA

<213> Homo sapiens

<400> 133

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<210> 134

<211> 230

<212> PRT

<213> Homo sapiens

<400> 134

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Leu Gly Leu Leu Gly Thr Leu Val Ala Met Leu Leu Pro Ser Trp
20 25 30

Lys Thr Ser Ser Tyr Val Gly Ala Ser Ile Val Thr Ala Val Gly 35 40 45

Phe Ser Lys Gly Leu Trp Met Glu Cys Ala Thr His Ser Thr Gly 50 55 60

Ile Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala 65 70 75

Asp Ile Gln Ala Ala Gln Ala Met Met Val Thr Ser Ser Ala Ile 80 85 90

Ser Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Arg Cys Thr 95 100 105

Val Phe Cys Gln Glu Ser Arg Ala Lys Asp Arg Val Ala Val Ala 110 115 120

Gly Gly Val Phe Phe Ile Leu Gly Gly Leu Leu Gly Phe Ile Pro 125 130 135

Val Ala Trp Asn Leu His Gly Ile Leu Arg Asp Phe Tyr Ser Pro 140 145 150

Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr 155 160 165

Leu Gly Ile Ile Ser Ser Leu Phe Ser Leu Ile Ala Gly Ile Ile 170 175 180

Leu Cys Phe Ser Cys Ser Ser Gln Arg Asn Arg Ser Asn Tyr Tyr 185 190 195

Asp Ala Tyr Gln Ala Gln Pro Leu Ala Thr Arg Ser Ser Pro Arg 200 205 210 Pro Gly Gln Pro Pro Lys Val Lys Ser Glu Phe Asn Ser Tyr Ser 215 220 225

Leu Thr Gly Tyr Val 230

<210> 135

<211> 610

<212> DNA

<213> Homo sapiens

<400> 135

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<210> 136

<211> 119

<212> PRT

<213> Homo sapiens

<400> 136

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Leu Leu Cys Pro Arg Glu Val Ile Ala Pro Ala Gly Ser Glu
20 25 30

Pro Trp Leu Cys Gln Pro Ala Pro Arg Cys Gly Asp Lys Ile Tyr 35 40 45

Asn Pro Leu Glu Gln Cys Cys Tyr Asn Asp Ala Ile Val Ser Leu
50 55 60

Ser Glu Thr Arg Gln Cys Gly Pro Pro Cys Thr Phe Trp Pro Cys

65 70 75

Phe Glu Leu Cys Cys Leu Asp Ser Phe Gly Leu Thr Asn Asp Phe 80 85 90

Val Val Lys Leu Lys Val Gln Gly Val Asn Ser Gln Cys His Ser 95 100 105

Ser Pro Ile Ser Ser Lys Cys Glu Ser Arg Arg Phe Pro 110 115

<210> 137

<211> 771

<212> DNA

<213> Homo sapiens

<400> 137

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<210> 138

<211> 110

<212> PRT

<213> Homo sapiens

<400> 138

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Thr Pro Tyr Leu Met Leu Cys Gln Pro His Lys Arg Cys Gly Asp 35 40 45

Lys Phe Tyr Asp Pro Leu Gln His Cys Cys Tyr Asp Asp Ala Val
50 55 60

Val Pro Leu Ala Arg Thr Gln Thr Cys Gly Asn Cys Thr Phe Arg
65 70 75

Val Cys Phe Glu Gln Cys Cys Pro Trp Thr Phe Met Val Lys Leu 80 85 90

Ile Asn Gln Asn Cys Asp Ser Ala Arg Thr Ser Asp Asp Arg Leu 95 100 105

Cys Arg Ser Val Ser 110

<210> 139

<211> 2044

<212> DNA

<213> Homo sapiens

<400> 139

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cccacggccc tggaggccgg cagctggcgc tggggatccc tgctcttcgc 200
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<210> 140

<211> 311

<212> PRT

<213> Homo sapiens

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Glu	Gly	Gln	Asn	Val 50	Thr	Leu	Thr	Cys	Arg 55	Leu	Leu	Gly	Pro	Val 60
Asp	Lys	Gly	His	Asp 65	Val	Thr	Phe	Tyr	Lys 70	Thr	Trp	Tyr	Arg	Ser 75
Ser	Arg	Gly	Glu	Val 80	Gln	Thr	Cys	Ser	Glu 85	Arg	Arg	Pro	Ile	Arg 90
Asn	Leu	Thr	Phe	Gln 95	Asp	Leu	His	Leu	His 100	His	Gly	Gly	His	Gln 105
Ala	Ala	Asn	Thr	Ser 110	His	Asp	Leu	Ala	Gln 115	Arg	His	Gly	Leu	Glu 120
Ser	Ala	Ser	Asp	His 125	His	Gly	Asn	Phe	Ser 130	Ile	Thr	Met	Arg	Asn 135
Leu	Thr	Leu	Leu	Asp 140	Ser	Gly	Leu	Tyr	Cys 145	Cys	Leu	Val	Val	Glu 150
Ile	Arg	His	His	His 155	Ser	Glu	His	Arg	Val 160	His	Gly	Ala	Met	Glu 165
Leu	Gln	Val	Gln	Thr 170	Gly	Lys	Asp	Ala	Pro 175	Ser	Asn	Cys	Val	Val 180
Tyr	Pro	Ser	Ser	Ser 185		Asp		Glu	Asn 190	Ile	Thr	Ala	Ala	Ala 195
Leu	Ala	Thr	Gly	Ala 200	Cys	Ile	Val	Gly	Ile 205	Leu	Cys	Leu	Pro	Leu 210
Ile	Leu	Leu	Leu	Val 215	Tyr	Lys	Gln	Arg	Gln 220	Ala	Ala	Ser	Asn	Arg 225
Arg	Ala	Gln	Glu	Leu 230	Val	Arg	Met	Asp	Ser 235	Asn	Ile	Gln	Gly	Ile 240
Glu	Asn	Pro	Gly	Phe 245	Glu	Ala	Ser	Pro	Pro 250	Ala	Gln	Gly	Ile	Pro 255
Glu	Ala	Lys	Val	Arg 260	His	Pro	Leu	Ser	Tyr 265	Val	Ala	Gln	Arg	Gln 270
Pro	Ser	Glu	Ser	Gly	Arg	His	Leu	Leu	Ser	Glu	Pro	Ser	Thr	Pro

275 280 285

Leu Ser Pro Pro Gly Pro Gly Asp Val Phe Pro Ser Leu Asp 290 295 300

Pro Val Pro Asp Ser Pro Asn Phe Glu Val Ile 305 310

<210> 141

<211> 1732

<212> DNA

<213> Homo sapiens

<400> 141

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<210> 142

<211> 451

<212> PRT

<213> Homo sapiens

<400> 142

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Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp 20 25 30

Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser 35 40 45

Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg
50 55 60

Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His

Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln 80 85 90

Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg 95 100 105

Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His 110 115 120

Gly	Glu	Ile	Phe	Ser 125	Ala	His	Glu	Leu	Phe 130	Pro	Ser	Arg	Leu	Pro 135
Asn	Gln	Cys	Val	Leu 140	Cys	Ser	Суѕ	Thr	Glu 145	Gly	Gln	Ile	Tyr	Cys 150
Gly	Leu	Thr	Thr	Cys 155	Pro	Glu	Pro	Gly	Cys 160	Pro	Ala	Pro	Leu	Pro 165
Leu	Pro	Asp	Ser	Cys 170	Суѕ	Gln	Ala	Суз	Lys 175	Asp	Glu	Ala	Ser	Glu 180
Gln	Ser	Asp	Glu	Glu 185	Asp	Ser	Val	Gln	Ser 190	Leu	His	Gly	Val	Arg 195
His	Pro	Gln	Asp	Pro 200	Cys	Ser	Ser	Asp	Ala 205	Gly	Arg	Lys	Arg	Gly 210
Pro	Gly	Thr	Pro	Ala 215	Pro	Thr	Gly	Leu	Ser 220	Ala	Pro	Leu	Ser	Phe 225
Ile	Pro	Arg	His	Phe 230	Arg	Pro	Lys	Gly	Ala 235	Gly	Ser	Thr	Thr	Val 240
Lys	Ile	Val	Leu	Lys 245	Glu	Lys	His	Lys	Lys 250	Ala	Cys	Val	His	Gly 255
Gly	Lys	Thr	Tyr	Ser 260	His	Gly	Glu	Val	Trp 265	His	Pro	Ala	Phe	Arg 270
Ala	Phe	Gly	Pro	Leu 275	Pro	Cys	Ile	Leu	Cys 280	Thr	Cys	Glu	Asp	Gly 285
Arg	Gln	Asp	Суѕ	Gln 290	Arg	Val	Thr	Cys	Pro 295	Thr	Glu	Tyr	Pro.	Cys 300
Arg	His	Pro	Glu	Lys 305	Val	Ala	Gly	Lys	Cys 310	Cys	Lys	Ile	Cys	Pro 315
Glu	Asp	Lys	Ala	Asp 320	Pro	Gly	His	Ser	Glu 325	Ile	Ser	Ser	Thr	Arg 330
Cys	Pro	Lys	Ala	Pro 335	Gly	Arg	Val	Leu	Val 340	His	Thr	Ser	Val	Ser 345
Pro	Ser	Pro	Asp	Asn 350	Leu	Arg	Arg	Phe	Ala 355	Leu	Glu	His	Glu	Ala 360
Ser	Asp	Leu	Val	Glu 365	Ile	Tyr	Leu	Trp	Lys 370	Leu	Val	Lys	Asp	Glu 375
Glu	Thr	Glu	Ala	Gln 380	Arg	Gly	Glu	Val	Pro 385	Gly	Pro	Arg	Pro	His 390
Ser	Gln	Asn	Leu	Pro 395	Leu	Asp	Ser	Asp	Gln 400	Glu	Ser	Gln	Glu	Ala 405

Arg Leu Pro Glu Arg Gly Thr Ala Leu Pro Thr Ala Arg Trp Pro 410 415 420

Pro Arg Arg Ser Leu Glu Arg Leu Pro Ser Pro Asp Pro Gly Ala 425 430 430

Glu Gly His Gly Gln Ser Arg Gln Ser Asp Gln Asp Ile Thr Lys
440 445 450

Thr

<210> 143

<211> 693

<212> DNA

<213> Homo sapiens

<400> 143

<210> 144

<211> 93

<212> PRT

<213> Homo sapiens

<400> 144

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Ala Gly Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val Thr Pro
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Gly Glu Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu Gln 35 40 45

Asp Pro Arg Ser Arg Glu Glu Ala Ala Arg Thr Gln Gln Leu Leu 50 55 60

Leu Ala Thr Leu Gln Glu Ala Ala Thr Thr Gln Glu Asn Val Ala 65 70 75

Trp Arg Lys Asn Trp Met Val Gly Gly Glu Gly Gly Ala Ser Gly 80 85 90

Arg Ser Pro

<210> 145

<211> 1883

<212> DNA

<213> Homo sapiens

<400> 145

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<210> 146

<211> 406

<212> PRT

<213> Homo sapiens

<400> 146

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Ser Gly Pro Leu Gln Gly Gln Gln His His Leu Val Glu Tyr Met
20 25 30

Glu Arg Arg Leu Ala Ala Leu Glu Glu Arg Leu Ala Gln Cys Gln
35 40 45

Asp Gln Ser Ser Arg His Ala Ala Glu Leu Arg Asp Phe Lys Asn

				50					55					60
Lys	Met	Leu	Pro	Leu 65	Leu	Glu	Val	Ala	Glu. 70	Lys	Glu	Arg	Glu	Ala 75
Leu	Arg	Thr	Glu	Ala 80	Asp	Thr	Ile	Ser	Gly 85	Arg	Val	Asp	Arg	Leu 90
Glu	Arg	Glu	Val	Asp 95	Tyr	Leu	Glu	Thr	Gln 100	Asn	Pro	Ala	Leu	Pro 105
Cys	Val	Glu	Phe	Asp 110	Glu	Lys	Val	Thr	Gly 115	Gly	Pro	Gly	Thr	Lys 120
Gly	Lys	Gly	Arg	Arg 125	Asn	Glu	Lys	Tyr	Asp 130	Met	Val	Thr	Asp	Cys 135
Gly	Tyr	Thr	Ile	Ser 140	Gln	Val	Arg	Ser	Met 145	Lys	Ile	Leu	Lys	Arg 150
Phe	Gly	Gly	Pro	Ala 155	Gly	Leu	Trp	Thr	Lys 160	Asp	Pro	Leu	Gly	Gln 165
Thr	Glu	Lys	Ile	Tyr 170	Val	Leu	Asp	Gly	Thr 175	Gln	Asn	Asp	Thr	Ala 180
Phe	Val	Phe	Pro	Arg 185	Leu	Arg	Asp	Phe	Thr 190	Leu	Ala	Met	Ala	Ala 195
Arg	Lys	Ala	Ser	Arg 200	Val	Arg	Val	Pro	Phe 205	Pro	Trp	Val	Gly	Thr 210
Gly	Gln	Leu	Val	Tyr 215	Gly	Gly	Phe	Leu	Tyr 220	Phe	Ala	Arg	Arg	Pro 225
Pro	Gly	Arg	Pro	Gly 230	Gly	Gly	Gly	Glu	Met .235	Glu	Asn	Thr	Leu	Gln 240
Leu	Ile	Lys	Phe	His 245	Leu	Ala	Asn	Arg	Thr 250	Val	Val	Asp	Ser	Ser 255
Val	Phe	Pro	Ala	Glu 260	Gly	Leu	Ile	Pro	Pro 265	Tyr	Gly	Leu	Thr	Ala 270
Asp	Thr	Tyr	Ile	Asp 275	Leu	Val	Ala	Asp	Glu 280	Glu	Gly	Leu	Trp	Ala 285
Val	Tyr	Ala	Thr	Arg 290	Glu	Asp	Asp	Arg	His 295	Leu	Cys	Leu	Ala	Lys 300
Leu	Asp	Pro	Gln	Thr 305	Leu	Asp	Thr	Glu	Gln 310	Gln	Trp	Asp	Thr	Pro 315
Cys	Pro	Arg	Glu	Asn 320	Ala	Glu	Ala	Ala	Phe 325	Val	Ile	Cys	Gly	Thr 330
Leu	Tyr	Val	Val	Tyr	Asn	Thr	Arg	Pro	Ala	Ser	Arg	Ala	Arg	Ile

Gln Cys Ser Phe Asp Ala Ser Gly Thr Leu Thr Pro Glu Arg Ala 360
Ala Leu Pro Tyr Phe Pro Arg Arg Tyr Gly Ala His Ala Ser Leu 375
Arg Tyr Asn Pro Arg Glu Arg Gln Leu Tyr Ala Trp Asp Asp Gly 380
Tyr Gln Ile Val Tyr Lys Leu Glu Met Arg Lys Lys Glu Glu 405

Val

<210> 147

<211> 2052

<212> DNA

<213> Homo sapiens

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Met Ala Leu Met Leu Ser Leu Val Leu Ser Leu Leu Lys Leu Gly

<210> 148

<211> 500

<212> PRT

<213> Homo sapiens

<400> 148

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Thr	Asn	Ala	Glu	Ala 50	Met	Glu	Val	Arg	Phe 55	Phe	Arg	Gly	Gln	Phe 60
Ser	Ser	Val	Val	His 65	Leu	Tyr	Arg	Asp	Gly 70	Lys	Asp	Gln	Pro	Phe 75
Met	Gln	Met	Pro	Gln 80	Tyr	Gln	Gly	Arg	Thr 85	Lys	Leu	Val	Lys	Asp 90
Ser	Ile	Ala	Glu	Gly 95	Arg	Ile	Ser	Leu	Arg 100	Leu	Glu	Asn	Ile	Thr 105
Val	Leu	Asp	Ala	Gly 110	Leu	Tyr	Gly	Суѕ	Arg 115	Ile	Ser	Ser	Gln	Ser 120
Tyr	Tyr	Gln	Lys	Ala 125	Ile	Trp	Glu	Leu	Gln 130	Val	Ser	Ala	Leu	Gly 135
Ser	Val	Pro	Leu	Ile 140	Ser	Ile	Thr	Gly	Tyr 145	Val	Asp	Arg	Asp	Ile 150
Gln	Leu	Leu	Cys	Gln 155	Ser	Ser	Gly	Trp	Phe 160	Pro	Arg	Pro	Thr	Ala 165
Lys	Trp	Lys	Gly	Pro 170	Gln	Gly	Gln	Asp	Leu 175	Ser	Thr	Asp	Ser	Arg 180
Thr	Asn	Arg	Asp	Met 185	His	Gly	Leu	Phe	Asp 190	Val	Glu	Ile	Ser	Leu 195
Thr	Val	Gln	Glu	Asn 200	Ala	Gly	Ser	Ile	Ser 205	Cys	Ser	Met	Arg	His 210
Ala	His	Leu	Ser	Arg 215	Glu	Val	Glu	Ser	Arg 220	Val	Gln	Ile	Gly	Asp 225
Thr	Phe	Phe	Glu	Pro 230	Ile	Ser	Trp	His	Leu 235	Ala	Thr	Lys	Val	Leu 240
Gly	Ile	Leu	Cys	Cys 245	Gly	Leu	Phe	Phe	Gly 250	Ile	Val	Gly	Leu	Lys 255
Ile	Phe	Phe	Ser	Lys 260	Phe	Gln	Trp	Lys	Ile 265	Gln	Ala	Glu	Leu	Asp 270
Trp	Arg	Arg	Lys	His 275	Gly	Gln	Ala	Glu	Leu 280	Arg	Asp	Ala	Arg	Lys 285
His	Ala	Val	Glu	Val	Thr	Leu	Asp	Pro	Glu	Thr	Ala	His	Pro	Lys

	290				295					300	
Leu Cys Val Se	er Asp Leu 305	Lys	Thr	Val	Thr 310	His	Arg	Lys	Ala	Pro 315	
Gln Glu Val Pr	o His Ser 320	Glu	Lys	Arg	Phe 325	Thr	Arg	Lys	Ser	Val 330	
Val Ala Ser G	In Ser Phe 335	Gln	Ala	Gly	Lys 340	His	Tyr	Trp	Glu	Val 345	
Asp Gly Gly H	is Asn Lys 350	Arg	Trp	Arg	Val 355	Gly	Val	Суз	Arg	Asp 360	
Asp Val Asp A	rg Arg Lys 365	Glu	Tyr	Val	Thr 370	Leu	Ser	Pro	Asp	His 375	
Gly Tyr Trp Va	al Leu Arg 380	Leu	Asn	Gly	Glu 385	His	Leu	Tyr	Phe	Thr 390	
Leu Asn Pro A	g Phe Ile 395	Ser	Val	Phe	Pro 400	Arģ	Thr	Pro	Pro	Thr 405	
Lys Ile Gly Va	al Phe Leu 410	Asp	Tyr	Glu	Cys 415	Gly	Thr	Ile	Ser	Phe 420	
Phe Asn Ile As	sn Asp Gln 425	Ser	Leu	Ile	Tyr 430	Thr	Leu	Thr	Cys	Arg 435	
Phe Glu Gly Le	eu Leu Arg 440	Pro	Tyr	Ile	Glu 445	Tyr	Pro	Ser	Tyr	Asn 450	
Glu Gln Asn G	Ly Thr Pro 455	Ile	Val	Ile	Cys 460	Pro	Val	Thr	Gln	Glu 465	
Ser Glu Lys G	lu Ala Ser 470	Trp	Gln	Arg	Ala 475	Ser	Ala	Ile	Pro	Glu 480	
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235

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 tggtggtgac cctcactcca gaaaacaacc tgcggacgct gtcctctcag 250
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Pro Arg Ala Gln Ala Val Trp Leu Gly Arg Leu Asp Pro Glu Gln 20 25 . 30

Leu Leu Gly Pro Trp Tyr Val Leu Ala Val Ala Ser Arg Glu Lys
35 40 45

Gly Phe Ala Met Glu Lys Asp Met Lys Asn Val Val Gly Val Val
50 55 60

Val Thr Leu Thr Pro Glu Asn Asn Leu Arg Thr Leu Ser Ser Gln
65 70 75

His Gly Leu Gly Gly Cys Asp Gln Ser Val Met Asp Leu Ile Lys 80 85 90

Arg Asn Ser Gly Trp Val Phe Glu Asn Pro Ser Ile Gly Val Leu 95 100 105

Glu Leu Trp Val Leu Ala Thr Asn Phe Arg Asp Tyr Ala Ile Ile 110 115 120

Phe Thr Gln Leu Glu Phe Gly Asp Glu Pro Phe Asn Thr Val Glu 125 130 135

Leu Tyr Ser Leu Thr Glu Thr Ala Ser Gln Glu Ala Met Gly Leu 140 145 150

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Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser Phe Ser Tyr
35 40 45

Pro Ser His Gly Trp Ile Tyr Pro Gly Pro Val Val His Gly Tyr 50 55 60

Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala
65 70 75

Thr Asn Asn Pro Ala Arg Ala Val Trp Glu Glu Thr Arg Asp Arg 80 85 90

Phe His Leu Leu Gly Asp Pro His Thr Lys Asn Cys Thr Leu Ser $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105$

Ile Arg Asp Ala Arg Arg Ser Asp Ala Gly Arg Tyr Phe Phe Arg
110 115 120

Met Glu Lys Gly Ser Ile Lys Trp Asn Tyr Lys His His Arg Leu 125 130 135

Ser Val Asn Val Thr Ala Leu Thr His Arg Pro Asn Ile Leu Ile 140 145 150

Pro Gly Thr Leu Glu Ser Gly Cys Pro Gln Asn Leu Thr Cys Ser

Val Pro Trp Ala Cys Glu Gln Gly Thr Pro Pro Met Ile Ser Trp 170 175 180

Ile	Gly	Thr	Ser	Val 185	Ser	Pro	Leu	Asp	Pro 190	Ser	Thr	Thr	Arg	Ser 195
Ser	Val	Leu	Thr	Leu 200	Ile	Pro	Gln	Pro	Gln 205	Asp	His	Gly	Thr	Ser 210
Leu	Thr	Cys	Gln	Val 215	Thr	Phe	Pro	Gly	Ala 220	Ser	Val	Thr	Thr	Asn 225
Lys	Thr	Val	His	Leu 230	Asn	Val	Ser	Tyr	Pro 235	Pro	Gln	Asn	Leu	Thr 240
Met	Thr	Val	Phe	Gln 245	Gly	Asp	Gly	Thr	Val 250	Ser	Thr	Val	Leu	Gly 255
Asn	Gly	Ser	Ser	Leu 260	Ser	Leu	Pro	Glu	Gly 265	Gln	Ser	Leu	Arg	Leu 270
Val	Cys	Ala	Val	Asp 275	Ala	Val	Asp	Ser	Asn 280	Pro	Pro	Ala	Arg	Leu 285
Ser	Leu	Ser	Trp	Arg 290	Gly	Leu	Thr	Leu	Cys 295	Pro	Ser	Gln	Pro	Ser 300
Asn	Pro	Gly	Val	Leu 305	Glu	Leu	Pro	Trp	Val 310	His	Leu	Arg	Asp	Ala 315
Ala	Glu	Phe	Thr	Cys 320	Arg	Ala	Gln	Asn	Pro 325	Leu	Gly	Ser	Gln	Gln 330
Val	Tyr	Leu	Asn	Val 335	Ser	Leu	Gln	Ser	Lys 340	Ala	Thr	Ser	Gly	Val 345
Thr	Gln	Gly	Val	Val 350	Gly	Gly	Ala	Gly	Ala 355	Thr	Ala	Leu	Val	Phe 360
Leu	Ser	Phe	Cys	Val 365	Ile	Phe	Val	Val	Val 370	Arg	Ser	Суѕ	Arg	Lys 375
Lys	Ser	Ala	Arg	Pro 380	Ala	Ala	Gly	Val	Gly 385	Asp	Thr	Gly	Ile	Glu 390
Asp	Ala	Asn	Ala	Val 395	Arg	Gly	Ser	Ala	Ser 400	Gln	Gly	Pro	Leu	Thr 405
Glu	Pro	Trp	Ala	Glu 410	Asp	Ser	Pro	Pro	Asp 415	Gln	Pro	Pro	Pro	Ala 420
Ser	Ala	Arg	Ser	Ser 425	Val	Gly	Glu	Gly	Glu 430	Leu	Gln	Tyr	Ala	Ser 435
Leu	Ser	Phe	Gln	Met 440	Val	Lys	Pro	Trp	Asp 445	Ser	Arg	Gly	Gln	Glu 450
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<210> 162

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaa 739

Leu Ser Phe Thr Leu Glu Glu Glu Asp Ile Thr Gly Thr Trp Tyr $20 \\ 25 \\ 30$

Val Lys Ala Met Val Val Asp Lys Asp Phe Pro Glu Asp Arg Arg 35 40 45

Pro Arg Lys Val Ser Pro Val Lys Val Thr Ala Leu Gly Gly Gly 50 55 60

Lys Leu Glu Ala Thr Phe Thr Phe Met Arg Glu Asp Arg Cys Ile
65 70 75

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 Ser Ala Tyr Gly Gly Arg Lys Leu Met Tyr Leu Gln Glu Leu Pro
 Arg Arg Asp His Tyr Ile Phe Tyr Cys Lys Asp Gln His His Gly
 Gly Leu Leu His Met Gly Lys Leu Val Gly Arg Asn Ser Asp Thr
 Asn Arg Glu Ala Leu Glu Glu Phe Lys Lys Leu Val Gln Arg Lys
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Val Gly Gly Glu Thr Arg Ile Ile Lys Gly Phe Glu Cys Lys Pro 20 25 30

His Ser Gln Pro Trp Gln Ala Ala Leu Phe Glu Lys Thr Arg Leu
35 40 45

Leu Cys Gly Ala Thr Leu Ile Ala Pro Arg Trp Leu Leu Thr Ala
50 55 60

Ala His Cys Leu Lys Pro Arg Tyr Ile Val His Leu Gly Gln His
65 70 75

Asn Leu Gln Lys Glu Glu Gly Cys Glu Gln Thr Arg Thr Ala Thr 80 85 90

Glu Ser Phe Pro His Pro Gly Phe Asn Asn Ser Leu Pro Asn Lys 95 100 105

10017253 121702

Asp	His	Arg	Asn	Asp 110	Ile	Met	Leu	Val	Lys 115	Met	Ala	Ser	Pro	Val 120
Ser	Ile	Thr	Trp	Ala 125	Val	Arg	Pro	Leu	Thr 130	Leu	Ser	Ser	Arg	Cys 135
Val	Thr	Ala	Gly	Thr 140	Ser	Cys	Leu	Ile	Ser 145	Gly	Trp	Gly	Ser	Thr 150
Ser	Ser	Pro	Gln	Leu 155	Arg	Leu	Pro	His	Thr 160	Leu	Arg	Cys	Ala	Asn 165
Ile	Thr	Ile	Ile	Glu 170	His	Gln	Lys	Cys	Glu 175	Asn	Ala	Tyr	Pro	Gly 180
Asn	Ile	Thr	Asp	Thr 185	Met	Val	Cys	Ala	Ser 190	Val	Gln	Glu	Gly	Gly 195
Lys	Asp	Ser	Cys	Gln 200	Gly	Asp	Ser	Gly	Gly 205	Pro	Leu	Val	Cys	Asn 210
Gln	Ser	Leu	Gln	Gly 215	Ile	Ile	Ser	Trp	Gly 220	Gln	Asp	Pro	Cys	Ala 225
Ile	Thr	Arg	Lys	Pro 230	Gly	Val	Tyr	Thr	Lys 235	Val	Cys	Lys	Tyr	Val 240
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 Ser Thr Glu Glu Val Lys Ile Glu Val Leu His Arg Pro Glu Asn
 Cys Ser Lys Thr Ser Lys Lys Gly Asp Leu Leu Asn Ala His Tyr
 Asp Gly Tyr Leu Ala Lys Asp Gly Ser Lys Phe Tyr Cys Ser Arg
 Thr Gln Asn Glu Gly His Pro Lys Trp Phe Val Leu Gly Val Gly
 Gln Val Ile Lys Gly Leu Asp Ile Ala Met Thr Asp Met Cys Pro
 Gly Glu Lys Arg Lys Val Val Ile Pro Pro Ser Phe Ala Tyr Gly
 Lys Glu Gly Tyr Ala Glu Gly Lys Ile Pro Pro Asp Ala Thr Leu
 Ile Phe Glu Ile Glu Leu Tyr Ala Val Thr Lys Gly Pro Arg Ser
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                                      145
 Ile Glu Thr Phe Lys Gln Ile Asp Met Asp Asn Asp Arg Gln Leu
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                 155
 Ser Lys Ala Glu Ile Asn Leu Tyr Leu Gln Arg Glu Phe Glu Lys
                                     175
                 170
Asp Glu Lys Pro Arg Asp Lys Ser Tyr Gln Asp Ala Val Leu Glu
                                     190
Asp Ile Phe Lys Lys Asn Asp His Asp Gly Asp Gly Phe Ile Ser
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Pro Lys Glu Tyr Asn Val Tyr Gln His Asp Glu Leu
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Pro Leu Glu Thr Cys Asn Ala Arg His Gly Gly Ser Arg Leu

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<210> 190
<211> 24
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 190
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<210> 191
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<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 191
cgttacatgt ctccaagggg aatg 24
<210> 192
<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 192
 cctgtgctaa gtgccccca aatgcttcct gtgtcaataa cactcactgc 50
<210> 193
<211> 1091
<212> DNA
<213> Homo sapiens
<400> 193
 caagcaggtc atccccttgg tgaccttcaa agagaagcag agagggcaga 50
 ggtgggggc acagggaaag ggtgacctct gagattcccc ttttccccca 100
 gactttggaa gtgacccacc atggggctca gcatcttttt gctcctgtgt 150
 gttcttgggc tcagccaggc agccacaccg aagattttca atggcactga 200
 gtgtgggcgt aactcacagc cgtggcaggt ggggctgttt gagggcacca 250
 geetgegetg egggggtgte ettattgace acaggtgggt ceteacageg 300
 gctcactgca gcggcagcag gtactgggtg cgcctggggg aacacagcct 350
 cagecagete gaetggaeeg ageagateeg geaeagegge ttetetgtga 400
 cccatcccgg ctacctggga gcctcgacga gccacgagca cgacctccgg 450
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<210> 194

<211> 248

<212> PRT

<213> Homo sapiens

<400> 194

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Gln Ala Ala Thr Pro Lys Ile Phe Asn Gly Thr Glu Cys Gly Arg
20 25 30

Asn Ser Gln Pro Trp Gln Val Gly Leu Phe Glu Gly Thr Ser Leu 35 40 45

Arg Cys Gly Gly Val Leu Ile Asp His Arg Trp Val Leu Thr Ala
50 55 60

Ala His Cys Ser Gly Ser Arg Tyr Trp Val Arg Leu Gly Glu His
65 70 75

Ser Leu Ser Gln Leu Asp Trp Thr Glu Gln Ile Arg His Ser Gly 80 85 90

Phe Ser Val Thr His Pro Gly Tyr Leu Gly Ala Ser Thr Ser His 95 100 105

Glu His Asp Leu Arg Leu Leu Arg Leu Arg Leu Pro Val Arg Val

Thr	Ser	Ser	Val	Gln 125	Pro	Leu	Pro	Leu	Pro 130	Asn	Asp	Cys	Ala	Thr 135
Ala	Gly	Thr	Glu	Cys 140	His	Val	Ser	Gly	Trp 145	Gly	Ile	Thr	Asn	His 150
Pro	Arg	Asn	Pro	Phe 155	Pro	Asp	Leu	Leu	Gln 160	Суѕ	Leu	Asn	Leu	Ser 165
Ile	Val	Ser	His	Ala 170	Thr	Cys	His	Gly	Val 175	Tyr	Pro	Gly	Arg	Ile 180
Thr	Ser	Asn	Met	Val 185	Суѕ	Ala	Gly	Gly	Val 190	Pro	Gly	Gln	Asp	Ala 195
Cys	Gln	Gly	Asp	Ser 200	Gly	Gly	Pro	Leu	Val 205	Cys	Gly	Gly	Val	Leu 210
Gln	Gly	Leu	Val	Ser 215	Trp	Gly	Ser	Val	Gly 220	Pro	Cys	Gly	Gln	Asp 225
Gly	Ile	Pro	Gly	Val 230	Tyr	Thr	Tyr	Ile	Cys 235	Lys	Tyr	Val	Asp	Trp 240
Ile	Arg	Met	Ile	Met 245	Arg	Asn	Asn					•		

<210> 195

<211> 1485

<212> DNA

<213> Homo sapiens

<400> 195

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tegecatgte gggegagete ageaacaggt teeaaggagg gaaggegtte 150
ggettgetea aageeeggea ggagaggagg etggeeggaa teaaceggga 200
gtttetgtgt gaceagaagt acagtgatga agagaacett eeagaaaage 250
teacageett eaaagagaag tacatggagt ttgacetgaa eaatgaagge 300
gagattgace tgatgeett aaagaggatg atggagaage ttggtgeee 350
caagaceeae etggagatga agaagatgat eteaagggt acaggagggg 400
teagtgacae tatateetae egagaettt tgaacatgat geegggaaa 450
eggteggetg teeteaagtt agteatgat tttgaaggaa aageeaacga 500
gagaeageee aageeagttg geeeeetee agagagagae attgetagee 550
tgeeetgagg acceegeetg gaeteeeeag eetteeeac ceatacetee 600

ctcccgatct tgctgccctt cttgacacac tgtgatctct ctctctca 650 tttgtttggt cattgagggt ttgtttgtgt tttcatcaat gtctttgtaa 700 aqcacaaatt atctqcctta aaqqqqctct qqqtcqqqqa atcctqaqcc 750 ttgggtcccc tccctcttt cttccctcct tccccgctcc ctgtgcagaa 800 qqqctqatat caaaccaaaa actagaqqqq qcaqqqccag qgcaqgqagg 850 cttccaqcct gtgttcccct cacttggagg aaccagcact ctccatcctt 900 tcagaaagtc tccaagccaa gttcaggctc actgacctgg ctctgacgag 950 qaccccaggc cactctgaga agaccttgga gtagggacaa ggctgcaggg 1000 cctctttcqq qtttccttqq acaqtqccat qqttccagtq ctctggtqtc 1050 acccaggaca cagccactcg gggccccqct gccccagctg atccccactc 1100 qcttqqcatt qqqaqccctt caaqaaqqta ccagaaqgaa ccctccagtc 1200 ctgctctctg gccacacctg tgcaggcagc tgagaggcag cgtgcagccc 1250 tactqtccct tactqqqqca qcaqaqqqct tcqqaqqcaq aagtqaqqcc 1300 tggggtttgg ggggaaaggt cagctcagtg ctgttccacc ttttagggag 1350 qatactqaqq qqaccaqqat qqqaqaatqa qqaqtaaaat gctcacggca 1400 aaqtcaqcaq cactqqtaaq ccaagactga gaaatacaag gttgcttgtc 1450 tgaccccaat ctgcttgaaa aaaaaaaaaa aaaaa 1485

<210> 196

<211> 150

<212> PRT

<213> Homo sapiens

<400> 196

Met Ser Gly Glu Leu Ser Asn Arg Phe Gln Gly Gly Lys Ala Phe
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Gly Leu Leu Lys Ala Arg Gln Glu Arg Arg Leu Ala Glu Ile Asn 20 25 30

Arg Glu Phe Leu Cys Asp Gln Lys Tyr Ser Asp Glu Glu Asn Leu 35 40 45

Pro Glu Lys Leu Thr Ala Phe Lys Glu Lys Tyr Met Glu Phe Asp
50 55 60

Leu Asn Asn Glu Gly Glu Ile Asp Leu Met Ser Leu Lys Arg Met
70
75

Met Glu Lys Leu Gly Val Pro Lys Thr His Leu Glu Met Lys Lys 80 85 90

Met Ile Ser Glu Val Thr Gly Gly Val Ser Asp Thr Ile Ser Tyr 95 100 105

Arg Asp Phe Val Asn Met Met Leu Gly Lys Arg Ser Ala Val Leu 110 115 120

Lys Leu Val Met Met Phe Glu Gly Lys Ala Asn Glu Ser Ser Pro 125 130 135

Lys Pro Val Gly Pro Pro Pro Glu Arg Asp Ile Ala Ser Leu Pro 140 $$ 145 $$ $$ 150

<210> 197

<211> 4842

<212> DNA

<213> Homo sapiens

<400> 197

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caatgccaac tocatotoot goodttogco otgcacgtgc agcaataaca 950 tcgtggactg tcgaggaaag ggcttgatgg agattcctgc caacttgccg 1000 gagggcatcg tcgaaatacg cctagaacag aactccatca aagccatccc 1050 tgcaggagcc ttcacccagt acaagaaact gaagcgaata gacatcagca 1100 agaatcagat atcggatatt gctccagatg ccttccaggg cctgaaatca 1150 ctcacatcgc tggtcctgta tgggaacaag atcaccgaga ttgccaaggg 1200 actgtttgat gggctggtgt ccctacagct gctcctcctc aatgccaaca 1250 agatcaactg cctgcgggtg aacacgtttc aggacctgca gaacctcaac 1300 ttgctctccc tgtatgacaa caagctgcag accatcagca aggggctctt 1350 egecectetg cagtecatee agacacteca ettageceaa aacceatttg 1400 tgtgcgactg ccacttgaag tggctggccg actacctcca ggacaacccc 1450 atcgagacaa gcggggcccg ctgcagcagc ccgcgccgac tcgccaacaa 1500 gcgcatcagc cagatcaaga gcaagaagtt ccgctgctca ggctccgagg 1550 attaccgcag caggttcagc agcgagtgct tcatggacct cgtgtgcccc 1600 gagaagtgtc gctgtgaggg cacgattgtg gactgctcca accagaagct 1650 ggtccgcatc ccaagccacc tccctgaata tgtcaccgac ctgcgactga 1700 atgacaatga ggtatctgtt ctggaggcca ctggcatctt caagaagttg 1750 cccaacctgc ggaaaataaa tctgagtaac aataagatca aggaggtgcg 1800 agagggaget ttegatggag cagecagegt geaggagetg atgetgaeag 1850 ggaaccaget ggagaccgtg cacgggegeg tgttccgtgg cetcagtgge 1900 ctcaaaacct tgatgctgag gagtaacttg atcagctgtg tgagtaatga 1950 cacctttgcc ggcctgagtt cggtgagact gctgtccctc tatgacaatc 2000 ggatcaccac catcacccct ggggccttca ccacgcttgt ctccctgtcc 2050 accataaacc teetgteeaa eccetteaac tgeaactgee acctggeetg 2100 gctcggcaag tggttgagga agaggcggat cgtcagtggg aaccctaggt 2150 gccagaagcc atttttcctc aaggagattc ccatccagga tgtggccatc 2200 caggacttca cctgtgatgg caacgaggag agtagctgcc agctgagccc 2250 gcgctgcccg gagcagtgca cctgtatgga gacagtggtg cgatgcagca 2300 acaaggggct ccgcgccctc cccagaggca tgcccaagga tgtgaccgag 2350

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<210> 198

<211> 1523

<212> PRT

<213> Homo sapiens

<400> 198

Met Ala Pro Gly Trp Ala Gly Val Gly Ala Ala Val Arg Ala Arg
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Leu Ala Leu Ala Leu Ala Ser Val Leu Ser Gly Pro Pro 20 25 30

Ala Val Ala Cys Pro Thr Lys Cys Thr Cys Ser Ala Ala Ser Val

				35					40					45
Asp	Суз	His	Gly	Leu 50	Gly	Leu	Arg	Ala	Val 55	Pro	Arg	Gly	Ile	Pro 60
Arg	Asn	Ala	Glu	Arg 65	Leu	Asp	Leu	Asp	Arg 70	Asn	Asn	Ile	Thr	Arg 75
Ile	Thr	Lys	Met	Asp 80	Phe	Ala	Gly	Leu	Lys 85	Asn	Leu	Arg	Val	Leu 90
His	Leu	Glu	Asp	Asn 95	Gln	Val	Ser	Val	Ile 100	Glu	Arg	Gly	Ala	Phe 105
Gln	Asp	Leu	Lys	Gln 110	Leu	Glu	Arg	Leu	Arg 115	Leu	Asn	Lys	Asn	Lys 120
Leu	Gln	Val	Leu	Pro 125	Glu	Leu	Leu	Phe	Gln 130	Ser	Thr	Pro	Lys	Leu 135
Thr	Arg	Leu	Asp	Leu 140	Ser	Glu	Asn	Gln	Ile 145	Gln	Gly	Ile	Pro	Arg 150
Lys	Ala	Phe	Arg	Gly 155	Ile	Thr	Asp	Val	Lys 160	Asn	Leu	Gln	Leu	Asp 165
Asn	Asn	His	Ile	Ser 170	Cys	Ile	Glu	Asp	Gly 175	Ala	Phe	Arg	Ala	Leu 180
Arg	Asp	Leu	Glu	Ile 185	Leu	Thr	Leu	Asn	Asn 190	Asn	Asn	Ile	Ser	Arg 195
Ile	Leu	Val	Thr	Ser 200	Phe	Asn	His	Met	Pro 205	Lys	Ile	Arg	Thr	Leu 210
Arg	Leu	His	Ser	Asn 215	His	Leu	Tyr	Cys	Asp 220	Cys	His	Leu	Ala	Trp 225
Leu	Ser	Asp	Trp	Leu 230	Arg	Gln	Arg	Arg	Thr 235	Val	Gly	Gln	Phe	Thr 240
Leu	Cys	Met	Ala	Pro 245	Val	His	Leu	Arg	Gly 250	Phe	Asn	Val	Ala	Asp 255
Val	Gln	Lys	Lys	Glu 260	Tyr	Val	Cys	Pro	Ala 265	Pro	His	Ser	Glu	Pro 270
Pro	Ser	Cys	Asn	Ala 275	Asn	Ser	Ile	Ser	Cys 280	Pro	Ser	Pro	Cys	Thr 285
Cys	Ser	Asn	Asn	Ile 290	Val	Asp	Cys	Arg	Gly 295	Lys	Gly	Leu	Met	Glu 300
Ile	Pro	Ala	Asn	Leu 305	Pro	Glu	Gly	Ile	Val 310	Glu	Ile	Arg	Leu	Glu 315
Cln	Aen	Sor	Tla	Luc	Δl =	Tla	Pro	Δla	Glv	Δla	Phe	Thr	Gln	Tur

				320					325					330
Lys	Lys	Leu	Lys	Arg 335	Ile	Asp	Ile	Ser	Lys 340	Asn	Gln	Ile	Ser	Asp 345
Ile	Ala	Pro	Asp	Ala 350	Phe	Gln	Gly	Leu	Lys 355	Ser	Leu	Thr	Ser	Leu 360
Val	Leu	Tyr	Gly	Asn 365	Lys	Ile	Thr	Glu	Ile 370	Ala	Lys	Gly	Leu	Phe 375
Asp	Gly	Leu	Val	Ser 380	Leu	Gln	Leu	Leu	Leu 385	Leu	Asn	Ala	Asn	Lys 390
Ile	Asn	Cys	Leu	Arg 395	Val	Asn	Thr	Phe	Gln 400	Asp	Leu	Gln	Asn	Leu 405
Asn	Leu	Leu	Ser	Leu 410	Tyr	Asp	Asn	Lys	Leu 415	Gln	Thr	Ile	Ser	Lys 420
Gly	Leu	Phe	Ala	Pro 425	Leu	Gln	Ser	Ile	Gln 430	Thr	Leu	His	Leu	Ala 435
Gln	Asn	Pro	Phe	Val 440	Cys	Asp	Cys	His	Leu 445	Lys	Trp	Leu	Ala	Asp 450
Tyr	Leu	Gln	Asp	Asn 455	Pro	Ile	Glu	Thr	Ser 460	Gly	Ala	Arg	Cys	Ser 465
Ser	Pro	Arg	Arg	Leu 470	Ala	Asn	Lys	Arg	Ile 475	Ser	Gln	Ile	Lys	Ser 480
Lys	Lys	Phe	Arg	Cys 485	Ser	Gly	Ser	Glu	Asp 490	Tyr	Arg	Ser	Arg	Phe 495
Ser	Ser	Glu	Cys	Phe 500	Met	Asp	Leu	Val	Cys 505	Pro	Glu	Lys	Суѕ	Arg 510
Cys	Glu	Gly	Thr	Ile 515	Val	Asp	Cys	Ser	Asn 520		Lys	Leu	Val	Arg 525
Ile	Pro	Ser	His	Leu 530	Pro	Glu	Tyr	Val	Thr 535	Asp	Leu	Arg	Leu	Asn 540
Asp	Asn	Glu	Val	Ser 545	Val	Leu	Glu	Ala	Thr 550	Gly	Ile	Phe	Lys	Lys 555
Leu	Pro	Asn	Leu	Arg 560	Lys	Ile	Asn	Leu	Ser 565	Asn	Asn	Lys	Ile	Lys 570
Glu	Val	Arg	Glu	Gly 575	Ala	Phe	Asp	Gly	Ala 580	Ala	Ser	Val	Gln	Glu 585
Leu	Met	Leu	Thr	Gly 590	Asn	Gln	Leu	Glu	Thr 595	Val	His	Gly	Arg	Val 600
Phe	Arg	Gly	Leu	Ser	Gly	Leu	Lys	Thr	Leu	Met	Leu	Arg	Ser	Asn

			605					610					615
Leu Ile	e Ser	Cys	Val 620	Ser	Asn	Asp	Thr	Phe 625	Ala	Gly	Leu	Ser	Ser 630
Val Arg	, Leu	Leu	Ser 635	Leu	Tyr	Asp	Asn	Arg 640	Ile	Thr	Thr	Ile	Thr 645
Pro Gly	' Ala	Phe	Thr 650	Thr	Leu	Val	Ser	Leu 655	Ser	Thr	Ile	Asn	Leu 660
Leu Ser	Asn	Pro	Phe 665	Asn	Cys	Asn	Суз	His 670	Leu	Ala	Trp	Leu	Gly 675
Lys Trp	Leu	Arg	Lys 680	Arg	Arg	Ile	Val	Ser 685	Gly	Asn	Pro	Arg	Cys 690
Gln Lys	Pro	Phe	Phe 695	Leu	Lys	Glu	Ile	Pro 700	Ile	Gln	Asp	Val	Ala 705
Ile Glr	Asp	Phe	Thr 710	Cys	Asp	Gly	Asn	Glu 715	Glu	Ser	Ser	Cys	Gln 720
Leu Ser	Pro	Arg	Cys 725	Pro	Glu	Gln	Cys	Thr 730	Cys	Met	Glu	Thr	Val 735
Val Arg	Суз	Ser	Asn 740	Lys	Gly	Leu	Arg	Ala 745	Leu	Pro	Arg	Gly	Met 750
Pro Lys	Asp	Val	Thr 755	Glu	Leu	Tyr	Leu	Glu 760	Gly	Asn	His	Leu	Thr 765
Ala Val	Pro	Arg	Glu 770	Leu	Ser	Ala	Leu	Arg 775	His	Leu	Thr	Leu	Ile 780
Asp Leu	Ser	Asn	Asn 785	Ser	Ile	Ser	Met	Leu 790	Thr	Asn	Tyr	Thr	Phe 795
Ser Asn	Met	Ser	His 800	Leu	Ser	Thr	Leu	Ile 805	Leu	Ser	Tyr	Asn	Arg 810
Leu Arg	Cys	Ile	Pro 815	Val	His	Ala	Phe	Asn 820	Gly	Leu	Arg	Ser	Leu 825
Arg Val	Leu	Thr	Leu 830	His	Gly	Asn	Asp	Ile 835	Ser	Ser	Val	Pro	Glu 840
Gly Ser	Phe	Asn	Asp 845	Leu	Thr	Ser	Leu	Ser 850	His	Leu	Ala	Leu	Gly 855
Thr Asn	Pro	Leu	His 860	Cys	Asp	Cys	Ser	Leu 865	Arg	Trp	Leu	Ser	Glu 870
Trp Val	Lys	Ala	Gly 875	Tyr	Lys	Glu	Pro	Gly 880	Ile	Ala	Arg	Cys	Ser 885
Ser Pro	Glu	Pro	Met	Ala	Asp	Arg	Leu	Leu	Leu	Thr	Thr	Pro	Thr

	890			895		900
His Arg Phe	Gln Cys 905	Lys Gly	Pro Val	Asp Ile 910	Asn Ile	Val Ala 915
Lys Cys Asn	Ala Cys 920	Leu Ser	Ser Pro	Cys Lys 925	Asn Asn	Gly Thr 930
Cys Thr Gln	Asp Pro 935	Val Glu	Leu Tyr	Arg Cys 940	Ala Cys	Pro Tyr 945
Ser Tyr Lys	Gly Lys 950	Asp Cys	Thr Val	Pro Ile 955	Asn Thr	Cys Ile 960
Gln Asn Pro	Cys Gln 965	His Gly	Gly Thr	Cys His 970	Leu Ser	Asp Ser 975
His Lys Asp	Gly Phe 980	Ser Cys	Ser Cys	Pro Leu 985	Gly Phe	Glu Gly 990
Gln Arg Cys	Glu Ile 995	Asn Pro		Cys Glu .000	Asp Asn	Asp Cys 1005
Glu Asn Asn	Ala Thr 1010	Cys Val		Ile Asn .015	Asn Tyr	Val Cys 1020
Ile Cys Pro	Pro Asn 1025	Tyr Thr	_	Leu Cys .030	Asp Glu	Val Ile 1035
Asp His Cys	Val Pro 1040	Glu Leu		Cys Gln .045	His Glu	Ala Lys 1050
Cys Ile Pro	Leu Asp 1055	Lys Gly		Cys Glu .060	Cys Val	Pro Gly 1065
Tyr Ser Gly	Lys Leu 1070	Cys Glu		Asn Asp .075	Asp Cys	Val Ala 1080
His Lys Cys	Arg His 1085	Gly Ala		Val Asp .090	Thr Ile	Asn Gly 1095
Tyr Thr Cys	Thr Cys 1100	Pro Gln		Ser Gly .105	Pro Phe	Cys Glu 1110
His Pro Pro	Pro Met 1115	Val Leu		Thr Ser 120	Pro Cys	Asp Gln 1125
Tyr Glu Cys	Gln Asn 1130	Gly Ala		Ile Val 135	Val Gln	Gln Glu 1140
Pro Thr Cys	Arg Cys 1145	Pro Pro		Ala Gly .150	Pro Arg	Cys Glu 1155
Lys Leu Ile	Thr Val 1160			Lys Asp .165	Ser Tyr	Val Glu 1170
Leu Ala Ser	Ala Lys	Val Arg	Pro Gln	Ala Asn	Ile Ser	Leu Gln

			1175				1180				1185
Val	Ala	Thr	Asp Lys 1190	Asp	Asn	Gly	Ile Leu 1195	Leu	Tyr	Lys	Gly Asp 1200
Asn	Asp	Pro	Leu Ala 1205	Leu	Glu	Leu	Tyr Gln 1210	Gly	His	Val	Arg Leu 1215
Val	Tyr	Asp	Ser Leu 1220	Ser	Ser	Pro	Pro Thr 1225	Thr	Val	Tyr	Ser Val 1230
Glu	Thr	Val	Asn Asp 1235	Gly	Gln	Phe	His Ser 1240	Val	Glu	Leu	Val Thr 1245
Leu	Asn	Gln	Thr Leu 1250	Asn	Leu	Val	Val Asp 1255	Lys	Gly	Thr	Pro Lys 1260
Ser	Leu	Gly	Lys Leu 1265	Gln	Lys	Gln	Pro Ala 1270	Val	Gly	Ile	Asn Ser 1275
Pro	Leu	Tyr	Leu Gly 1280	Gly	Ile	Pro	Thr Ser 1285	Thr	Gly	Leu	Ser Ala 1290
Leu	Arg	Gln	Gly Thr 1295	Asp	Arg	Pro	Leu Gly 1300	Gly	Phe	His	Gly Cys 1305
Ile	His	Glu	Val Arg 1310	Ile	Asn	Asn	Glu Leu 1315	Gln	Asp	Phe	Lys Ala 1320
Leu	Pro	Pro	Gln Ser 1325	Leu	Gly	Val	Ser Pro 1330	Gly	Суз	Lys	Ser Cys 1335
Thr	Val	Cys	Lys His 1340	Gly	Leu	Cys	Arg Ser 1345	Val	Glu	Lys	Asp Ser 1350
Val	Val	Cys	Glu Cys 1355	Arg	Pro	Gly	Trp Thr 1360	Gly	Pro	Leu	Cys Asp 1365
Gln	Glu	Ala	Arg Asp 1370	Pro	Cys	Leu	Gly His 1375	Arg	Cys	His	His Gly 1380
Lys	Суѕ	Val	Ala Thr 1385	Gly	Thr	Ser	Tyr Met 1390	Суѕ	Lys	Cys	Ala Glu 1395
Gly	Tyr	Gly	Gly Asp 1400	Leu	Cys	Asp	Asn Lys 1405	Asn	Asp	Ser	Ala Asn 1410
Ala	Cys	Ser	Ala Phe 1415	Lys	Cys	His	His Gly 1420	Gln	Cys	His	Ile Ser 1425
Asp	Gln	Gly	Glu Pro 1430	Tyr	Cys	Leu	Cys Gln 1435	Pro	Gly	Phe	Ser Gly 1440
Glu	His	Cys	Gln Gln 1445	Glu	Asn	Pro	Cys Leu 1450	Gly	Gln	Val	Val Arg 1455
C1.,	W-1	T10	Dra Dra	Cln	Tuc	Clv	Tur Ala	Sor	Cve	ΔΙα	Thr Ala

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1470
                1460
                                     1465
 Ser Lys Val Pro Ile Met Glu Cys Arg Gly Gly Cys Gly Pro Gln
                1475
                                     1480
 Cys Cys Gln Pro Thr Arg Ser Lys Arg Arg Lys Tyr Val Phe Gln
                1490
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 Cys Thr Asp Gly Ser Ser Phe Val Glu Glu Val Glu Arg His Leu
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              1505
                                     1510
 Glu Cys Gly Cys Leu Ala Cys Ser
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 gagggcatcg tcgaaatacg cctagaacag aactccatca aagccatccc 50
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gaatctgeet titeagtiet gieteeggea ggettigagg atgaaggetg 150 egggeattet gaeceteatt ggetgeetgg teacaggege egggteeaaa 200 atetacacte gitigaaact ggeaaaaata titetegaggg etggeetgga 250 caattactgg ggetteagee titggaaactg gatetgeatg geatattatg 300 agageggeta caacaccaca geecegaegg teetggatga eggeageate 350 gaetatggea tetteeagat eaacagette gegtggtgea gaegeggaaa 400 getgaaggag aacaaccact geeatgtege etgeteagee titgateactg 450 atgaecteae agatgeaatt atetgtgeea ggaaaaattgt taaagagaea 500 eaaggaatga actattggea aggetggaag aacaacttgtg agggeagaga 550 eetgteegag titgeagaaa geetgtgaggt titeetaaact ggaactggae 600 eetgtgteat ettgeeegt titeeteeaa tatteettet eaaacttgga 700 gagggaaaat taagetatae tittaagaaa ataaatatt eeatttaaat 750 gte 753

<210> 203

<211> 148

<212> PRT

<213> Homo sapiens

<400> 203

Met Lys Ala Ala Gly Ile Leu Thr Leu Ile Gly Cys Leu Val Thr $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Ala Glu Ser Lys Ile Tyr Thr Arg Cys Lys Leu Ala Lys Ile $20 \\ 25 \\ 30$

Phe Ser Arg Ala Gly Leu Asp Asn Tyr Trp Gly Phe Ser Leu Gly 35 40 45

Asn Trp Ile Cys Met Ala Tyr Tyr Glu Ser Gly Tyr Asn Thr Thr
50 55 60

Ala Pro Thr Val Leu Asp Asp Gly Ser Ile Asp Tyr Gly Ile Phe
65 70 75

Gln Ile Asn Ser Phe Ala Trp Cys Arg Arg Gly Lys Leu Lys Glu 80 85 90

Asn Asn His Cys His Val Ala Cys Ser Ala Leu Ile Thr Asp Asp 95 100 105

Leu Thr Asp Ala Ile Ile Cys Ala Arg Lys Ile Val Lys Glu Thr
110 115 120

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Gln Gly Met Asn Tyr Trp Gln Gly Trp Lys Lys His Cys Glu Gly
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                                                           135
                 125
 Arg Asp Leu Ser Glu Trp Lys Lys Gly Cys Glu Val Ser
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ccagtcggac aggtctctcc cctc 24
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<400> 207
tcagtgacca aggctgagca ggcg 24
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<223> Synthetic oligonucleotide probe

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<210> 209

<211> 1648

<212> DNA

<213> Homo sapiens

<400> 209

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<400> 210

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Glu Lys Phe Lys Leu Phe Thr Leu Val Ser Ala Cys Ile Pro Val
20 25 30

Phe Arg Leu Ala Arg Arg Lys Lys Ile Leu Phe Tyr Cys His
35 40 45

Phe Pro Asp Leu Leu Thr Lys Arg Asp Ser Phe Leu Lys Arg 50 55 60

Leu Tyr Arg Ala Pro Ile Asp Trp Ile Glu Glu Tyr Thr Thr Gly
65 70 75

Met Ala Asp Cys Ile Leu Val Asn Ser Gln Phe Thr Ala Ala Val 80 85 90

Phe Lys Glu Thr Phe Lys Ser Leu Ser His Ile Asp Pro Asp Val 95 100 105

Leu Tyr Pro Ser Leu Asn Val Thr Ser Phe Asp Ser Val Val Pro 110 115 120

Glu Lys Leu Asp Asp Leu Val Pro Lys Gly Lys Lys Phe Leu Leu 125 130 135

Leu Ser Ile Asn Arg Tyr Glu Arg Lys Lys Asn Leu Thr Leu Ala 140 145 150

Leu Glu Ala Leu Val Gln Leu Arg Gly Arg Leu Thr Ser Gln Asp

<210> 210

<211> 323

<212> PRT

<213> Homo sapiens

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Val	Leu	Glu	Asn	Val 185	Glu	His	Tyr	Gln	Glu 190	Leu	Lys	Lys	Met	Val 195
Gln	Gln	Ser	Asp	Leu 200	Gly	Gln	Tyr	Val	Thr 205	Phe	Leu	Arg	Ser	Phe 210
Ser	Asp	Lys	Gln	Lys 215	Ile	Ser	Leu	Leu	His 220	Ser	Cys	Thr	Cys	Val 225
Leu	Tyr	Thr	Pro	Ser 230	Asn	Glu	His	Phe	Gly 235	Ile	Val	Pro	Leu	Glu 240
Ala	Met	Tyr	Met	Gln 245	Cys	Pro	Val	Ile	Ala 250	Val	Asn	Ser	Gly	Gly 255
Pro	Leu	Glu	Ser	Ile 260	Asp	His	Ser	Val	Thr 265	Gly	Phe	Leu	Cys	Glu 270
Pro	Asp	Pro	Val	His 275	Phe	Ser	Glu	Ala	Ile 280	Glu	Lys	Phe	Ile	Arg 285
Glu	Pro	Ser	Leu	Lys 290	Ala	Thr	Met	Gly	Leu 295	Ala	Gly	Arg	Ala	Arg 300
Val	Lys	Glu	Lys	Phe 305	Ser	Pro	Glu	Ala	Phe 310	Thr	Glu	Gln	Leu	Tyr 315
Arg	Tyr	Val	Thr	Lys 320	Leu	Leu	Val							
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<210> 211

<211> 1554

<212> DNA

<213> Homo sapiens

<400> 211

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accacatgag gaaaaaattg tatgaaaatg gtgtgactga ttctctgaag 450 agtaactttg ccctcctcct aaagctttca gaagaattat tagataaatg 500 qctctcctac ccaqaqaccc agcacqtqcc cctcagccag catatgcttg 550 gttttgctat gaagtctgtt acacagatgg taatgggtag tacatttgaa 600 gatgatcagg aagtcattcg cttccagaag aatcatggca cagtttggtc 650 tgagattgga aaaggctttc tagatgggtc acttgataaa aacatgactc 700 ggaaaaaaca atatgaagat gccctcatgc aactggagtc tgttttaagg 750 aacatcataa aagaacgaaa aggaaggaac ttcagtcaac atattttcat 800 tgactcctta gtacaaggga accttaatga ccaacagatc ctagaagaca 850 gtatgatatt ttctctggcc agttgcataa taactgcaaa attgtgtacc 900 tgggcaatct gttttttaac cacctctgaa gaagttcaaa aaaaattata 950 tgaagagata aaccaagttt ttggaaatgg tcctgttact ccagagaaaa 1000 ttgagcagct cagatattgt cagcatgtgc tttgtgaaac tgttcgaact 1050 qccaaactga ctccagtttc tqcccagctt caagatattg aaggaaaaat 1100 tgaccgattt attatteeta gagagaeeet egteetttat geeettggtg 1150 tggtacttca ggatcctaat acttggccat ctccacacaa gtttgatcca 1200 gateggtttg atgatgaatt agtaatgaaa acttttteet cacttggatt 1250 ctcaggcaca caggagtgtc cagagttgag gtttgcatat atggtgacca 1300 cagtacttct tagtgtattg gtgaagagac tgcacctact ttctgtggag 1350 qqacaqqtta ttqaaacaaa qtatqaactq qtaacatcat caagggaaga 1400 agcttggatc actgtctcaa agagatatta aaattttata catttaaaat 1450 cattottaaa ttgattgagg aaaacaacca tttaaaaaaa atctatgttg 1500 aatcctttta taaaccagta tcactttgta atataaacac ctatttgtac 1550 ttaa 1554 <210> 212

<211> 462

<212> PRT

<213> Homo sapiens

<400> 212

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Gly	Ile	Pro	Gly	Ile 35	Thr	Pro	Thr	Glu	Glu 40	Lys	Asp	Gly	Asn	Leu 45
Pro	Asp	Ile	Val	Asn 50	Ser	Gly	Ser	Leu	His 55	Glu	Phe	Leu	Val	Asn 60
Leu	His	Glu	Arg	Tyr 65	Gly	Pro	Val	Val	Ser 70	Phe	Trp	Phe	Gly	Arg 75
Arg	Leu	Val	Val	Ser 80	Leu	Gly	Thr	Val	Asp 85	Val	Leu	Lys	Gln	His 90
Ile	Asn	Pro	Asn	Lys 95	Thr	Ser	Asp	Pro	Phe 100	Glu	Thr	Met	Leu	Lys 105
Ser	Leu	Leu	Arg	Tyr 110	Gln	Ser	Gly	Gly	Gly 115	Ser	Val	Ser	Glu	Asn 120
His	Met	Arg	Lys	Lys 125	Leu	Tyr	Glu	Asn	Gly 130	Val	Thr	Asp	Ser	Leu 135
Lys	Ser	Asn	Phe	Ala 140	Leu	Leu	Leu	Lys	Leu 145	Ser	Glu	Glu	Leu	Leu 150
Asp	Lys	Trp	Leu	Ser 155	Tyr	Pro	Glu	Thr	Gln 160	His	Val	Pro	Leu	Ser 165
Gln	His	Met	Leu	Gly 170	Phe	Ala	Met	Lys	Ser 175	Val	Thr	Gln	Met	Val 180
Met	Gly	Ser	Thr	Phe 185	Glu	Asp	Asp	Gln	Glu 190	Val	Ile	Arg	Phe	Gln 195
Lys	Asn	His	Gly	Thr 200	Val	Trp	Ser	Glu	Ile 205	Gly	Lys	Gly	Phe	Leu 210
Asp	Gly	Ser	Leu	Asp 215	Lys	Asn	Met	Thr	Arg 220	Lys	Lys	Gln	Tyr	Glu 225
Asp	Ala	Leu	Met	Gln 230	Leu	Glu	Ser	Val	Leu 235	Arg	Asn	Ile	Ile	Lys 240
Glu	Arg	Lys	Gly	Arg 245	Asn	Phe	Ser	Gln	His 250	Ile	Phe	Ile	Asp	Ser 255
Leu	Val	Gln	Gly	Asn 260	Leu	Asn	Asp	Gln	Gln 265	Ile	Leu	Glu	Asp	Ser 270
Met	Ile	Phe	Ser	Leu 275	Ala	Ser	Cys	Ile	Ile 280	Thr	Ala	Lys	Leu	Cys 285
Thr	Trp	Ala	Ile	Cys 290	Phe	Leu	Thr	Thr	Ser 295	Glu	Glu	Val	Gln	Lys 300

Lys Leu	Tyr	Glu	Glu 305	Ile	Asn	Gln	Val	Phe 310	Gly	Asn	Gly	Pro	Val 315
Thr Pro	Glu	Lys	Ile 320	Glu	Gln	Leu	Arg	Tyr 325	Cys	Gln	His	Val	Leu 330
Cys Glu	Thr	Val	Arg 335	Thr	Ala	Lys	Leu	Thr 340	Pro	Val	Ser	Ala	Gln 345
Leu Gln	Asp	Ile	Glu 350	Gly	Lys	Ile	Asp	Arg 355	Phe	Ile	Ile	Pro	Arg 360
Glu Thr	Leu	Val	Leu 365	Tyr	Ala	Leu	Gly	Val 370	Val	Leu	Gln	Asp	Pro 375
Asn Thr	Trp	Pro	Ser 380	Pro	His	Lys	Phe	Asp 385	Pro	Asp	Arg	Phe	Asp 390
Asp Glu	Leu	Val	Met 395	Lys	Thr	Phe	Ser	Ser 400	Leu	Gly	Phe	Ser	Gly 405
Thr Gln	Glu	Cys	Pro 410	Glu	Leu	Arg	Phe	Ala 415	Tyr	Met	Val	Thr	Thr 420
Val Leu	Leu	Ser	Val 425	Leu	Val	Lys	Arg	Leu 430	His	Leu	Leu	Ser	Val 435
Glu Gly	Gln	Val	Ile 440	Glu	Thr	Lys	Tyr	Glu 445	Leu	Val	Thr	Ser	Ser 450
Arg Glu	Glu	Ala	Trp 455	Ile	Thr	Val	Ser	Lys 460	Arg	Tyr			

<210> 213

<211> 759

<212> DNA

<213> Homo sapiens

<400> 213

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egteateace ttattetggt eeegggaeag eaacataeag geetgeetge 200
eteteacgtt eaceeegag gagtatgaea ageaggaeat teagetggtg 250
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eeteteagga gteteeatgt teaaeageae eeagageete ateteeattg 350
gggeteactg tagtgeatee gtggeeetgt eettetteat attegagegt 400
tgggagtgea etaegtattg gtaeatttt gtettetgea gtgeeettee 450

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<210> 214

<211> 140

<212> PRT

<213> Homo sapiens

<400> 214

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Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp
20 25 30

Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu 35 40 45

Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr
50 55 60

Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val
65 70 75

Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His 80 85 90

Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp 95 100 105

Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu 110 115 120

Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu 125 130 135

Lys Lys Lys Pro Phe 140

<210> 215

<211> 697

<212> DNA

<213> Homo sapiens

<400> 215

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<210> 216

<211> 196

<212> PRT

<213> Homo sapiens

<400> 216

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Leu Arg Leu Gly Ala Ala Gln Glu Thr Glu Asp Pro Ala Cys Cys 20

Ser Pro Ile Val Pro Arg Asn Glu Trp Lys Ala Leu Ala Ser Glu

Cys Ala Gln His Leu Ser Leu Pro Leu Arg Tyr Val Val Ser

His Thr Ala Gly Ser Ser Cys Asn Thr Pro Ala Ser Cys Gln Gln

Gln Ala Arg Asn Val Gln His Tyr His Met Lys Thr Leu Gly Trp

Cys Asp Val Gly Tyr Asn Phe Leu Ile Gly Glu Asp Gly Leu Val 95 100 105

Tyr Glu Gly Arg Gly Trp Asn Phe Thr Gly Ala His Ser Gly His 120

115

Leu Trp Asn Pro Met Ser Ile Gly Ile Ser Phe Met Gly Asn Tyr 125 130 135

Met Asp Arg Val Pro Thr Pro Gln Ala Ile Arg Ala Ala Gln Gly
140 145 150

Leu Leu Ala Cys Gly Val Ala Gln Gly Ala Leu Arg Ser Asn Tyr
155 160 165

Val Leu Lys Gly His Arg Asp Val Gln Arg Thr Leu Ser Pro Gly
170 175 180

Asn Gln Leu Tyr His Leu Ile Gln Asn Trp Pro His Tyr Arg Ser 185 190 195

Pro

<210> 217

<211> 1871

<212> DNA

<213> Homo sapiens

<400> 217

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<210> 218

<211> 252

<212> PRT

<213> Homo sapiens

<400> 218

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Leu Tyr Leu Val Ile Cys Gly Gln Asp Asp Gly Pro Pro Gly Ser 20 25 30

Glu Asp Pro Glu Arg Asp Asp His Glu Gly Gln Pro Arg Pro Arg
35 40 45

	Val	Pro	Arg	Lys	Arg 50	Gly	His	Ile	Ser	Pro 55	Lys	Ser	Arg	Pro	Met 60
	Ala	Asn	Ser	Thr	Leu 65	Leu	Gly	Leu	Leu	Ala 70	Pro	Pro	Gly	Glu	Ala 75
	Trp	Gly	Ile	Leu	Gly 80	Gln	Pro	Pro	Asn	Arg 85	Pro	Asn	His	Ser	Pro 90
	Pro	Pro	Ser	Ala	Lys 95	Val	Lys	Lys	Ile	Phe 100	Gly	Trp	Gly	Asp	Phe 105
	Tyr	Ser	Asn	Ile	Lys 110	Thr	Val	Ala	Leu	Asn 115	Leu	Leu	Val	Thr	Gly 120
	Lys	Ile	Val	Asp	His 125	Gly	Asn	Gly	Thr	Phe 130	Ser	Val	His	Phe	Gln 135
	His	Asn	Ala	Thr	Gly 140	Gln	Gly	Asn	Ile	Ser 145	Ile	Ser	Leu	Val	Pro 150
	Pro	Ser	Lys	Ala	Val 155	Glu	Phe	His	Gln	Glu 160	Gln	Gln	Ile	Phe	Ile 165
	Glu	Ala	Lys	Ala	Ser 170	Lys	Ile	Phe	Asn	Cys 175	Arg	Met	Glu	Trp	Glu 180
	Lys	Val	Glu	Arg	Gly 185	Arg	Arg	Thr	Ser	Leu 190	Cys	Thr	His	Asp	Pro 195
	Ala	Lys	Ile	Cys	Ser 200	Arg	Asp	His	Ala	Gln 205	Ser	Ser	Ala	Thr	Trp 210
	Ser	Cys	Ser	Gln	Pro 215	Phe	Lys	Val	Val	Cys 220	Val	Tyr	Ile	Ala	Phe 225
	Tyr	Ser	Thr	Asp	Tyr 230	Arg	Leu	Val	Gln	Lys 235	Val	Cys	Pro	Asp	Tyr 240
	Asn	Tyr	His	Ser	Asp 245	Thr	Pro	Tyr	Tyr	Pro 250	Ser	Gly			
<	210>	219)												
		206													
_	010.	D117													

<212> DNA

<213> Homo sapiens

<400> 219

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gegeegeege egeegteget eetgeagege tgtegaceta geegetagea 250 tetteeegag caeegggate eeggggtagg aggegaegeg ggegageaee 300 agegecagee ggetgegget geceaeaegg eteaeeatgg geteegggeg 350 ccgggcgctg tccgcggtgc cggccgtgct gctggtcctc acgctgccgg 400 ggctgcccgt ctgggcacag aacgacacgg agcccatcgt gctggagggc 450 aagtgtctgg tggtgtgcga ctcgaacccg gccacggact ccaagggctc 500 ctcttcctcc ccgctgggga tatcggtccg ggcggccaac tccaaggtcg 550 ccttctcggc ggtgcggagc accaaccacg agccatccga gatgagcaac 600 aagacgcgca tcatttactt cgatcagatc ctggtgaatg tgggtaattt 650 tttcacattg gagtctgtct ttgtagcacc aagaaaagga atttacagtt 700 tcagttttca cgtgattaaa gtctaccaga gccaaactat ccaggttaac 750 ttgatgttaa atggaaaacc agtaatatct gcctttgcgg gggacaaaga 800 tgttactcgt gaagctgcca cgaatggtgt cctgctctac ctagataaag 850 aggataaggt ttacctaaaa ctggagaaag gtaatttggt tggaggctgg 900 cagtattcca cgttttctgg ctttctggtg ttccccctat aggattcaat 950 ttctccatga tgttcatcca ggtgagggat gacccactcc tgagttattg 1000 gaagatcatt ttttcatcat tggattgatg tcttttattg gtttctcatg 1050 ggtggatatg gattctaagg attctagcct gtctgaacca atacaaaatt 1100 tcacagatta tttgtgtgtg tctgtttcag tatatttgga ttgggactct 1150 aagcagataa tacctatgct taaatgtaac agtcaaaagc tgtctgcaag 1200 acttattctg aatttcattt cctgggatta ctgaattagt tacagatgtg 1250 gaattttatt tgtttagttt taaaagactg gcaaccaggt ctaaggatta 1300 gaaaactcta aagttctgac ttcaatcaac ggttagtgtg atactgccaa 1350 agaactgtat actgtgttaa tatattgatt atatttgttt ttattccttt 1400 ggaattagtt tgtttggttc ttgtaaaaaa cttggatttt ttttttcagt 1450 aactggtatt atgttttctc ttaaaataag gtaatgaatg gcttgcccac 1500 aaatttacct tgactacgat atcatcgaca tgacttctct caaaaaaaaa 1550 gaatgcttca tagttgtatt ttaattgtat atgtgaaaga gtcatatttt 1600 ccaagttata ttttctaaga agaagaatag atcataaatc tgacaaggaa 1650 aaagttgctt acccaaaatc taagtgctca atccctgagc ctcagcaaaa 1700 cagctcccct ccgagggaaa tcttatactt tattgctcaa ctttaattaa 1750 aatgattgat aataaccact ttattaaaaa cctaaggttt tttttttc 1800 cgtagacatg accactttat taactggtgg tgggatgctg ttgtttctaa 1850 ttatacctat ttttcaaggc ttctgttgta tttgaagtat catctggttt 1900 tgccttaact ctttaaattg tatatatta tctgtttagc taatattaaa 1950 ttcaaatatc ccatatctaa atttagtgca atatcttgtc ttttgtatag 2000 gtcatatgaa ttcataaaat tatttatgtc tgttatagaa taaagattaa 2050 tatatgttaa aaaaa 2065

<210> 220

<211> 201

<212> PRT

<213> Homo sapiens

<400> 220

Met Gly Ser Gly Arg Arg Ala Leu Ser Ala Val Pro Ala Val Leu 1 5 10 15

Leu Val Leu Thr Leu Pro Gly Leu Pro Val Trp Ala Gln Asn Asp
20 25 30

Thr Glu Pro Ile Val Leu Glu Gly Lys Cys Leu Val Val Cys Asp
35 40 45

Ser Asn Pro Ala Thr Asp Ser Lys Gly Ser Ser Ser Pro Leu
50 55 60

Gly Ile Ser Val Arg Ala Ala Asn Ser Lys Val Ala Phe Ser Ala
65 70 75

Val Arg Ser Thr Asn His Glu Pro Ser Glu Met Ser Asn Lys Thr 80 85 90

Arg Ile Ile Tyr Phe Asp Gln Ile Leu Val Asn Val Gly Asn Phe 95 100 105

Phe Thr Leu Glu Ser Val Phe Val Ala Pro Arg Lys Gly Ile Tyr 110 115 120

Ser Phe Ser Phe His Val Ile Lys Val Tyr Gln Ser Gln Thr Ile 125 130 135

Gln Val Asn Leu Met Leu Asn Gly Lys Pro Val Ile Ser Ala Phe 140 . 145 150

Ala Gly Asp Lys Asp Val Thr Arg Glu Ala Ala Thr Asn Gly Val 155 160 165

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Leu Leu Tyr Leu Asp Lys Glu Asp Lys Val Tyr Leu Lys Leu Glu
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                                      175
 Lys Gly Asn Leu Val Gly Gly Trp Gln Tyr Ser Thr Phe Ser Gly
                                      190
 Phe Leu Val Phe Pro Leu
                 200
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 221
 acggctcacc atgggctccg 20
<210> 222
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<400> 222
 aggaagagga gcccttggag tccg 24
<210> 223
<211> 40
<212> DNA
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<211> 902
<212> DNA
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 tatcatcttc ctcatcgccg gagetttctt ctggttggtg tctctactga 150
 tttcgtccct tgtttggttc atggcaagag tcattattga caacaaagat 200
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tatecaagaa atgtteegat ttgeatatta taaactetta aaaaaageca 300
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ctgetggeet atgtteetgg ettgggettt ggaateatga gtggagtatt 400
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tteatggaga tteteeteaa tteeteettt atteagettt eatgaegge 500
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aetttettet ttacaaceag egeteeagat aaceteaggg aaceageaet 800
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ta 902

<210> 225

<211> 257

<212> PRT

<213> Homo sapiens

<400> 225

Met Thr Ala Ala Val Phe Phe Gly Cys Ala Phe Ile Ala Phe Gly
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Pro Ala Leu Ala Leu Tyr Val Phe Thr Ile Ala Ile Glu Pro Leu 20 25 30

Arg Ile Ile Phe Leu Ile Ala Gly Ala Phe Phe Trp Leu Val Ser 35 40 45

Leu Leu Ile Ser Ser Leu Val Trp Phe Met Ala Arg Val Ile Ile 50 55 60

Asp Asn Lys Asp Gly Pro Thr Gln Lys Tyr Leu Leu Ile Phe Gly
65 70 75

Ala Phe Val Ser Val Tyr Ile Gln Glu Met Phe Arg Phe Ala Tyr 80 85 90

Tyr Lys Leu Leu Lys Lys Ala Ser Glu Gly Leu Lys Ser Ile Asn
95 100 105

Pro	Glv	Glu	Thr	Ala	Pro	Ser	Met	Arg	Leu	Leu	Ala	Tvr	Val	Ser
	1	5		110				5	115			4		120
Gly	Leu	Gly	Phe	Gly 125	Ile	Met	Ser	Gly	Val 130	Phe	Ser	Phe	Val	Asn 135
Thr	Leu	Ser	Asp	Ser 140	Leu	Gly	Pro	Gly	Thr 145	Val	Gly	Ile	His	Gly 150
Asp	Ser	Pro	Gln	Phe 155	Phe	Leu	Tyr	Ser	Ala 160	Phe	Met	Thr	Leu	Val 165
Ile	Ile	Leu	Leu	His 170	Val	Phe	Trp	Gly	Ile 175	Val	Phe	Phe	Asp	Gly 180
Cys	Glu	Lys	Lys	Lys 185	Trp	Gly	Ile	Leu	Leu 190	Ile	Val	Leu	Leu	Thr 195
His	Leu	Leu	Val	Ser 200	Ala	Gln	Thr	Phe	Ile 205	Ser	Ser	Tyr	Tyr	Gly 210
Ile	Asn	Leu	Ala	Ser 215	Ala	Phe	Ile	Ile	Leu 220	Val	Leu	Met	Gly	Thr 225
Trp	Ala	Phe	Leu	Ala 230	Ala	Gly	Gly	Ser	Cys 235	Arg	Ser	Leu	Lys	Leu 240
Cys	Leu	Leu	Cys	Gln 245	Asp	Lys	Asn	Phe	Leu 250	Leu	Tyr	Asn	Gln	Arg 255
Ser	Arg													

Ser Arg

<210> 226

<211> 3939

<212> DNA

<213> Homo sapiens

<400> 226

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gagceatetg ggggttetgg ggeecaagaa egtetegeag aaagaegeeg 150
agtttgageg cacetacgtg gacgaggtea acagegaget ggteaacate 200
tacacettea accatactgt gaccegeaae aggacagagg gegtgegtgt 250
gtetgtgaae gteetgaaca agcagaaggg ggegeegttg etgtttgtgg 300
teegeeagaa ggaggetgtg gtgteettee aggtgeeet aateetgega 350
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teageeeee accaagaatg agteggagat teagttette taegtggatg 450

tgtccaccct gtcaccagtc aacaccacat accagctccg ggtcagccgc 500 atggacgatt ttgtgctcag gactggggag cagttcagct tcaataccac 550 agcagcacag ccccagtact tcaagtatga gttccctgaa ggcgtggact 600 cggtaattgt caaggtgacc tccaacaagg ccttcccctg ctcagtcatc 650 tccattcagg atgtgctgtg tcctgtctat gacctggaca acaacgtagc 700 cttcatcggc atgtaccaga cgatgaccaa gaaggcggcc atcaccgtac 750 agcgcaaaga cttccccagc aacagctttt atgtggtggt ggtggtgaag 800 accgaagacc aagcctgcgg gggctccctg cctttctacc ccttcgcaga 850 agatgaaccg gtcgatcaag ggcaccgcca gaaaaccctg tcagtgctgg 900 tgtctcaagc agtcacgtct gaggcatacg tcagtgggat gctcttttgc 950 ctgggtatat ttctctcctt ttacctgctg accgtcctcc tggcctgctg 1000 ggagaactgg aggcagaaga agaagaccct gctggtggcc attgaccgag 1050 cctgcccaga aagcggtcac cctcgagtcc tggctgattc ttttcctggc 1100 agttcccctt atgagggtta caactatggc tcctttgaga atgtttctgg 1150 atctaccgat ggtctggttg acagcgctgg cactggggac ctctcttacg 1200 gttaccaggg ccgctccttt gaacctgtag gtactcggcc ccgagtggac 1250 tccatgaget ctgtggagga ggatgactac gacacattga ccgacatcga 1300 ttccgacaag aatgtcattc gcaccaagca atacctctat gtggctgacc 1350 tggcacggaa ggacaagcgt gttctgcgga aaaagtacca gatctacttc 1400 tggaacattg ccaccattgc tgtcttctat gcccttcctg tggtgcagct 1450 ggtgatcacc taccagacgg tggtgaatgt cacagggaat caggacatct 1500 gctactacaa cttcctctgc gcccacccac tgggcaatct cagcgccttc 1550 aacaacatcc tcagcaacct ggggtacatc ctgctggggc tgcttttcct 1600 gctcatcatc ctgcaacggg agatcaacca caaccgggcc ctgctgcgca 1650 atgacetetg tgeeetggaa tgtgggatee ecaaacaett tgggetttte 1700 tacgccatgg gcacagccct gatgatggag gggctgctca gtgcttgcta 1750 tcatgtgtgc cccaactata ccaatttcca gtttgacaca tcgttcatgt 1800 acatgatege eggactetge atgetgaage tetaceagaa geggeaeeeg 1850 gacatcaacg ccagcgccta cagtgcctac gcctgcctgg ccattgtcat 1900

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<210> 227

<211> 832

<212> PRT

<213> Homo sapiens

<400> 227

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Lys Asp Ala Glu Phe Glu Arg Thr Tyr Val Asp Glu Val Asn Ser 35 40 45

Glu Leu Val Asn Ile Tyr Thr Phe Asn His Thr Val Thr Arg Asn 50 55 60

Arg Thr Glu Gly Val Arg Val Ser Val Asn Val Leu Asn Lys Gln 65 70 75

Lys Gly Ala Pro Leu Leu Phe Val Val Arg Gln Lys Glu Ala Val 80 85 90

Val Ser Phe Gln Val Pro Leu Ile Leu Arg Gly Met Phe Gln Arg

Lys Tyr Leu Tyr Gln Lys Val Glu Arg Thr Leu Cys Gln Pro Pro 110 115 120

Thr Lys Asn Glu Ser Glu Ile Gln Phe Phe Tyr Val Asp Val Ser

				125					130					135
Thr	Leu	Ser	Pro	Val 140	Asn	Thr	Thr	Tyr	Gln 145	Leu	Arg	Val	Ser	Arg 150
Met	Asp	Asp	Phe	Val 155	Leu	Arg	Thr	Gly	Glu 160	Gln	Phe	Ser	Phe	Asn 165
Thr	Thr	Ala	Ala	Gln 170	Pro	Gln	Tyr	Phe	Lys 175	Tyr	Glu	Phe	Pro	Glu 180
Gly	Val	Asp	Ser	Val 185	Ile	Val	Lys	Val	Thr 190	Ser	Asn	Lys	Ala	Phe 195
Pro	Cys	Ser	Val	Ile 200	Ser	Ile	Gln	Asp	Val 205	Leu	Cys	Pro	Val	Tyr 210
Asp	Leu	Asp	Asn	Asn 215	Val	Ala	Phe	Ile	Gly 220	Met	Tyr	Gln	Thr	Met 225
Thr	Lys	Lys	Ala	Ala 230	Ile	Thr	Val	Gln	Arg 235	Lys	Asp	Phe	Pro	Ser 240
Asn	Ser	Phe	Tyr	Val 245	Val	Val	Val	Val	Lys 250	Thr	Glu	Asp	Gln	Ala 255
Cys	Gly	Gly	Ser	Leu 260	Pro	Phe	Tyr	Pro	Phe 265	Ala	Glu	Asp	Glu	Pro 270
Val	Asp	Gln	Gly	His 275	Arg	Gln	Lys	Thr	Leu 280	Ser	Val	Leu	Val	Ser 285
Gln	Ala	Val	Thr	Ser 290	Glu	Ala	Tyr	Val	Ser 295	Gly	Met	Leu	Phe	Cys 300
Leu	Gly	Ile	Phe	Leu 305	Ser	Phe	Tyr	Leu	Leu 310	Thr	Val	Leu	Leu	Ala 315
Cys	Trp	Glu	Asn	Trp 320	Arg	Gln	Lys	Lys	Lys 325	Thr	Leu	Leu	Val	Ala 330
Ile	Asp	Arg	Ala	Cys 335	Pro	Glu	Ser	Gly	His 340	Pro	Arg	Val	Leu	Ala 345
Asp	Ser	Phe	Pro	Gly 350	Ser	Ser	Pro	Tyr	Glu 355	Gly	Tyr	Asn	Tyr	Gly 360
Ser	Phe	Glu	Asn	Val 365	Ser	Gly	Ser	Thr	Asp 370	Gly	Leu	Val	Asp	Ser 375
Ala	Gly	Thr	Gly	Asp 380	Leu	Ser	Tyr	Gly	Tyr 385	Gln	Gly	Arg	Ser	Phe 390
Glu	Pro	Val	Gly	Thr 395	Arg	Pro	Arg	Val	Asp 400	Ser	Met	Ser	Ser	Val 405
Glu	Glu	Asp	Asp	Tyr	Asp	Thr	Leu	Thr	Asp	Ile	Asp	Ser	Asp	Lys

			410					415					420
Asn Val	Ile	Arg	Thr 425	Lys	Gln	Tyr	Leu	Tyr 430	Val	Ala	Asp	Leu	Ala 435
Arg Lys	Asp	Lys	Arg 440	Val	Leu	Arg	Lys	Lys 445	Tyr	Gln	Ile	Tyr	Phe 450
Trp Asn	Ile	Ala	Thr 455	Ile	Ala	Val	Phe	Tyr 460	Ala	Leu	Pro	Val	Val 465
Gln Leu	Val	Ile	Thr 470	Tyr	Gln	Thr	Val	Val 475	Asn	Val	Thr	Gly	Asn 480
Gln Asp	Ile	Cys	Tyr 485	Tyr	Asn	Phe	Leu	Cys 490	Ala	His	Pro	Leu	Gly 495
Asn Leu	Ser	Ala	Phe 500	Asn	Asn	Ile	Leu	Ser 505	Asn	Leu	Gly	Tyr	Ile 510
Leu Leu	Gly	Leu	Leu 515	Phe	Leu	Leu	Ile	Ile 520	Leu	Gln	Arg	Glu	Ile 525
Asn His	Asn	Arg	Ala 530	Leu	Leu	Arg	Asn	Asp 535	Leu	Cys	Ala	Leu	Glu 540
Cys Gly	Ile	Pro	Lys 545	His	Phe	Gly	Leu	Phe 550	Tyr	Ala	Met	Gly	Thr 555
Ala Leu	Met	Met	Glu	Gly	Leu	Leu	Ser	Ala	Cys	Tyr	His	Val	
			560					565					570
Pro Asn	Tyr	Thr		Phe	Gln				Ser			Tyr	
Pro Asn			Asn 575			Phe	Asp	Thr 580		Phe	Met		Met 585
	Gly	Leu	Asn 575 Cys 590	Met	Leu	Phe Lys	Asp Leu	Thr 580 Tyr 595	Gln	Phe Lys	Met Arg	His	Met 585 Pro 600
Ile Ala	Gly	Leu Ala	Asn 575 Cys 590 Ser 605	Met Ala	Leu Tyr	Phe Lys Ser	Asp Leu Ala	Thr 580 Tyr 595 Tyr 610	Gln Ala	Phe Lys Cys	Met Arg Leu	His Ala	Met 585 Pro 600 Ile 615
Ile Ala	Gly Asn Phe	Leu Ala Phe	Asn 575 Cys 590 Ser 605 Ser 620	Met Ala Val	Leu Tyr Leu	Phe Lys Ser Gly	Asp Leu Ala Val	Thr 580 Tyr 595 Tyr 610 Val 625	Gln Ala Phe	Phe Lys Cys Gly	Met Arg Leu Lys	His Ala Gly	Met 585 Pro 600 Ile 615 Asn 630
Ile Ala Asp Ile Val Ile	Gly Asn Phe	Leu Ala Phe Trp	Asn 575 Cys 590 Ser 605 Ser 620 Ile 635	Met Ala Val	Leu Tyr Leu Phe	Phe Lys Ser Gly	Asp Leu Ala Val Ile	Thr 580 Tyr 595 Tyr 610 Val 625 Ile 640	Gln Ala Phe His	Phe Lys Cys Gly Ile	Met Arg Leu Lys	His Ala Gly Ala	Met 585 Pro 600 Ile 615 Asn 630 Thr 645
Ile Ala Asp Ile Val Ile Thr Ala	Gly Asn Phe Leu	Leu Ala Phe Trp Ser	Asn 575 Cys 590 Ser 605 Ser 620 Ile 635 Thr 650	Met Ala Val Val Gln	Leu Tyr Leu Phe Leu	Phe Lys Ser Gly Ser	Asp Leu Ala Val Ile	Thr 580 Tyr 595 Tyr 610 Val 625 Ile 640 Met 655	Gln Ala Phe His	Phe Lys Cys Gly Ile Arg	Met Arg Leu Lys Ile Trp	His Ala Gly Ala Lys	Met 585 Pro 600 Ile 615 Asn 630 Thr 645 Leu 660
Ile Ala Asp Ile Val Ile Thr Ala Leu Leu	Gly Asn Phe Phe Gly	Leu Ala Phe Trp Ser	Asn 575 Cys 590 Ser 605 Ser 620 Ile 635 Thr 650 Phe 665	Met Ala Val Val Gln Arg	Leu Tyr Leu Phe Leu Arg	Phe Lys Ser Gly Ser Tyr	Asp Leu Ala Val Ile Tyr Leu	Thr 580 Tyr 595 Tyr 610 Val 625 Ile 640 Met 655 His 670	Gln Ala Phe His Gly Val	Phe Lys Cys Gly Ile Arg	Met Arg Leu Lys Ile Trp Tyr	His Ala Gly Ala Lys	Met 585 Pro 600 Ile 615 Asn 630 Thr 645 Leu 660 Asp 675

				695					700					705
Gly	Leu	Ile	Met	Arg 710	Pro	Asn	Asp	Phe	Ala 715	Ser	Tyr	Leu	Leu	Ala 720
Ile	Gly	Ile	Cys	Asn 725	Leu	Leu	Leu	Tyr	Phe 730	Ala	Phe	Tyr	Ile	Ile 735
Met	Lys	Leu	Arg	Ser 740	Gly	Glu	Arg	Ile	Lys 745	Leu	Ile	Pro	Leu	Leu 750
Cys	Ile	Val	Cys	Thr 755	Ser	Val	Val	Trp	Gly 760	Phe	Ala	Leu	Phe	Phe 765
Phe	Phe	Gln	Gly	Leu 770	Ser	Thr	Trp	Gln	Lys 775	Thr	Pro	Ala	Glu	Ser 780
Arg	Glu	His	Asn	Arg 785	Asp	Cys	Ile	Leu	Leu 790	Asp	Phe	Phe	Asp	Asp 795
His	Asp	Ile	Trp	His 800	Phe	Leu	Ser	Ser	Ile 805	Ala	Met	Phe	Gly	Ser 810
Phe	Leu	Val	Leu	Leu 815	Thr	Leu	Asp	Asp	Asp 820	Leu	Asp	Thr	Val	Gln 825
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<213> Homo sapiens

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Glu Asn Tyr Gly Gly Asn Phe Pro Leu Tyr Leu Thr Lys Leu Pro
35 40 45

Leu Pro Arg Glu Gly Ala Glu Gly Gln Ile Val Leu Ser Gly Asp
50 55 60

Ser Gly Lys Ala Thr Glu Gly Pro Phe Ala Met Asp Pro Asp Ser 65 70 75

Gly Phe Leu Leu Val Thr Arg Ala Leu Asp Arg Glu Glu Gln Ala

	80		. 85			90
Glu Tyr Gln Le	eu Gln Val 95	Thr Leu	Glu Met 100	Gln Asp	Gly His	Val 105
Leu Trp Gly Pr	co Gln Pro 110	Val Leu	Val His 115	Val Lys	Asp Glu	Asn 120
Asp Gln Val Pr	o His Phe 125	Ser Gln	Ala Ile 130	Tyr Arg	Ala Arg	Leu 135
Ser Arg Gly Th	nr Arg Pro 140	Gly Ile	Pro Phe 145	Leu Phe	Leu Glu	Ala 150
Ser Asp Arg As	sp Glu Pro 155	Gly Thr	Ala Asn 160	Ser Asp	Leu Arg	Phe 165
His Ile Leu Se	er Gln Ala 170	Pro Ala	Gln Pro 175	Ser Pro	Asp Met	Phe 180
Gln Leu Glu Pr	o Arg Leu 185	Gly Ala	Leu Ala 190	Leu Ser	Pro Lys	Gly 195
Ser Thr Ser Le	eu Asp His 200	Ala Leu	Glu Arg 205	Thr Tyr	Gln Leu	Leu 210
Val Gln Val Ly	ys Asp Met 215	Gly Asp	Gln Ala 220	Ser Gly	His Gln	Ala 225
Thr Ala Thr Va	al Glu Val 230	Ser Ile	Ile Glu 235	Ser Thr	Trp Val	Ser 240
Leu Glu Pro Il	le His Leu 245	Ala Glu	Asn Leu 250	Lys Val	Leu Tyr	Pro 255
His His Met Al	la Gln Val 260	His Trp	Ser Gly 265	Gly Asp	Val His	Tyr 270
His Leu Glu Se	er His Pro 275	Pro Gly	Pro Phe 280	Glu Val	Asn Ala	Glu 285
Gly Asn Leu Ty	yr Val Thr 290	Arg Glu	Leu Asp 295	Arg Glu	Ala Gln	Ala 300
Glu Tyr Leu Le	eu Gln Val 305	Arg Ala	Gln Asn 310	Ser His	Gly Glu	Asp 315
Tyr Ala Ala Pr	co Leu Glu 320	Leu His	Val Leu 325	Val Met	Asp Glu	Asn 330
Asp Asn Val Pr	co Ile Cys 335	Pro Pro	Arg Asp 340	Pro Thr	Val Ser	Ile 345
Pro Glu Leu Se	er Pro Pro 350	Gly Thr	Glu Val 355	Thr Arg	Leu Ser	Ala 360
Glu Asp Ala As	sp Ala Pro	Gly Ser	Pro Asn	Ser His	Val Val	Tyr

	365	3.	70	375
Gln Leu Leu Ser	Pro Glu Pro 380		ly Val Glu G 85	ly Arg Ala 390
Phe Gln Val Asp	Pro Thr Ser 395		al Thr Leu G 00	ly Val Leu 405
Pro Leu Arg Ala	Gly Gln Asn 410		eu Leu Val L 15	eu Ala Met 420
Asp Leu Ala Gly	Ala Glu Gly 425		er Ser Thr C	ys Glu Val 435
Glu Val Ala Val	Thr Asp Ile		is Ala Pro G 45	lu Phe Ile 450
Thr Ser Gln Ile	Gly Pro Ile 455		ro Glu Asp V 60	al Glu Pro 465
Gly Thr Leu Val	Ala Met Leu 470		le Asp Ala A 75	sp Leu Glu 480
Pro Ala Phe Arg	Leu Met Asp 485		le Glu Arg G 90	ly Asp Thr 495
Glu Gly Thr Phe	Gly Leu Asp 500		ro Asp Ser G 05	ly His Val 510
Arg Leu Arg Leu	Cys Lys Asn 515		yr Glu Ala A 20	la Pro Ser 525
His Glu Val Val	Val Val Val 530		al Ala Lys L 35	eu Val Gly 540
Pro Gly Pro Gly	Pro Gly Ala 545		hr Val Thr Va 50	al Leu Val 555
Glu Arg Val Met	Pro Pro Pro 560		sp Gln Glu S 65	er Tyr Glu 570
Ala Ser Val Pro	Ile Ser Ala 575		ly Ser Phe L 80	eu Leu Thr 585
Ile Gln Pro Ser	Asp Pro Ile 590		hr Leu Arg Pl 95	he Ser Leu 600
Val Asn Asp Ser	Glu Gly Trp 605	Leu Cys I		he Ser Gly 615
Glu Val His Thr	Ala Gln Ser 620		ly Ala Gln P 25	ro Gly Asp 630
Thr Tyr Thr Val	Leu Val Glu 635		sp Thr Ala L 40	eu Thr Leu 645
Ala Pro Val Pro	Ser Gln Tyr	Leu Cys Tl	hr Pro Arg G	ln Asp His

				650					655					660
Gly	Leu	Ile	Val	Ser 665	Gly	Pro	Ser	Lys	Asp 670	Pro	Asp	Leu	Ala	Ser 675
Gly	His	Gly	Pro	Tyr 680	Ser	Phe	Thr	Leu	Gly 685	Pro	Asn	Pro	Thr	Val 690
Gln	Arg	Asp	Trp	Arg 695	Leu	Gln	Thr	Leu	Asn 700	Gly	Ser	His	Ala	Tyr 705
Leu	Thr	Leu	Ala	Leu 710	His	Trp	Val	Glu	Pro 715	Arg	Glu	His	Ile	Ile 720
Pro	Val	Val	Val	Ser 725	His	Asn	Ala	Gln	Met 730	Trp	Gln	Leu	Leu	Val 735
Arg	Val	Ile	Val	Cys 740	Arg	Cys	Asn	Val	Glu 745	Gly	Gln	Cys	Met	Arg 750
Lys	Val	Gly	Arg	Met 755	Lys	Gly	Met	Pro	Thr 760	Lys	Leu	Ser	Ala	Val 765
Gly	Ile	Leu	Val	Gly 770	Thr	Leu	Val	Ala	Ile 775	Gly	Ile	Phe	Leu	Ile 780
Leu	Ile	Phe	Thr	His 785	Trp	Thr	Met	Ser	Arg 790	Lys	Lys	Asp	Pro	Asp 795
Gln	Pro	Ala	Asp	Ser 800	Val	Pro	Leu	Lys	Ala 805	Thr	Val			
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Val Arg Asn Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Asn 35 40 45

Ser Asn Asn Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe 50 55 60

Asn Arg Pro Val Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala 65 70 75

Phe Lys Ser Phe Leu Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr 80 85 90

Ile Glu Asp Leu Gln Ala Leu Leu Asp Asn Glu Asp Asp Glu Met 95 100 105

Gln His Asn Glu Gly Gln Glu Arg Ser Ser Asn Asn Phe Asn Tyr 110 115 120

Gly Ala Tyr His Ser Leu Glu Ala Ile Tyr His Glu Met Asp Asn 125 130 135

Ile Ala Ala Asp Phe Pro Asp Leu Ala Arg Arg Val Lys Ile Gly
140 145 150

His Ser Phe Glu Asn Arg Pro Met Tyr Val Leu Lys Phe Ser Thr 155 160 165

Gly Lys Gly Val Arg Arg Pro Ala Val Trp Leu Asn Ala Gly Ile 170 175 180

His Ser Arg Glu Trp Ile Ser Gln Ala Thr Ala Ile Trp Thr Ala 185 190 195

Arg Lys Ile	Val Ser 200		Tyr	Gln	Arg	Asp 205	Pro	Ala	Ile	Thr	Ser 210
Ile Leu Glu	Lys Met 215	Asp	Ile	Phe	Leu	Leu 220	Pro	Val	Ala	Asn	Pro 225
Asp Gly Tyr	Val Tyr 230	Thr	Gln	Thr	Gln	Asn 235	Arg	Leu	Trp	Arg	Lys 240
Thr Arg Ser	Arg Asn 245	Pro	Gly	Ser	Ser	Cys 250	Ile	Gly	Ala	Asp	Pro 255
Asn Arg Asn	Trp Asn 260		Ser	Phe	Ala	Gly 265	Lys	Gly	Ala	Ser	Asp 270
Asn Pro Cys	Ser Glu 275		Tyr	His	Gly	Pro 280	His	Ala	Asn	Ser	Glu 285
Val Glu Val	Lys Ser 290		Val	Asp	Phe	Ile 295	Gln	Lys	His	Gly	Asn 300
Phe Lys Gly	Phe Ile 305		Leu	His	Ser	Tyr 310	Ser	Gln	Leu	Leu	Met 315
Tyr Pro Tyr	Gly Tyr 320		Val	Lys	Lys	Ala 325	Pro	Asp	Ala	Glu	Glu 330
Leu Asp Lys	Val Ala 335	_	Leu	Ala	Ala	Lys 340	Ala	Leu	Ala	Ser	Val 345
Ser Gly Thr	Glu Tyr 350		Val	Gly	Pro	Thr 355	Cys	Thr	Thr	Val	Tyr 360
Pro Ala Ser	Gly Ser 365	Ser	Ile	Asp	Trp	Ala 370	Tyr	Asp	Asn	Gly	Ile 375
Lys Phe Ala	Phe Thr		Glu	Leu	Arg	Asp 385	Thr	Gly	Thr	Tyr	Gly 390
Phe Leu Leu	Pro Ala 395		Gln	Ile	Ile	Pro 400	Thr	Ala	Glu	Glu	Thr 405
Trp Leu Gly	Leu Lys 410		Ile	Met	Glu	His 415	Val	Arg	Asp	Asn	Leu 420
Tyr											

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35 40 45

Ser Leu Asn Thr Asp Phe Ala Phe Arg Leu Tyr Arg Arg Leu Val
50 55 60

Leu Glu Thr Pro Ser Gln Asn Île Phe Phe Ser Pro Val Ser Val
65 70 75

Ser Thr Ser Leu Ala Met Leu Ser Leu Gly Ala His Ser Val Thr 80 85 90

Lys Thr Gln Ile Leu Gln Gly Leu Gly Phe Asn Leu Thr His Thr 95 100 105

Pro Glu Ser Ala Ile His Gln Gly Phe Gln His Leu Val His Ser 110 115 120

Leu Thr Val Pro Ser Lys Asp Leu Thr Leu Lys Met Gly Ser Ala 125 130 135

Leu Phe Val Lys Lys Glu Leu Gln Leu Gln Ala Asn Phe Leu Gly
140 145 150

Asn Val Lys Arg Leu Tyr Glu Ala Glu Val Phe Ser Thr Asp Phe 155 160 165

Ser Asn Pro Ser Ile Ala Gln Ala Arg Ile Asn Ser His Val Lys 170 175 180

Lys Lys Thr Gln Gly Lys Val Val Asp Ile Ile Gln Gly Leu Asp 185 190 195

Leu Leu Thr Ala Met Val Leu Val Asn His Ile Phe Phe Lys Ala 200 205 210

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Pro	Phe	Leu	Val	Gly 230	Glu	Gln	Val	Thr	Val 235	Gln	Val	Pro	Met	Met 240
His	Gln	Lys	Glu	Gln 245	Phe	Ala	Phe	Gly	Val 250	Asp	Thr	Glu	Leu	Asn 255
Cys	Phe	Val	Leu	Gln 260	Met	Asp	Tyr	Lys	Gly 265	Asp	Ala	Val	Ala	Phe 270
Phe	Val	Leu	Pro	Ser 275	Lys	Gly	Lys	Met	Arg 280	Gln	Leu	Glu	Gln	Ala 285
Leu	Ser	Ala	Arg	Thr 290	Leu	Ile	Lys	Trp	Ser 295	His	Ser	Leu	Gln	Lys 300
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Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Val Ser Thr Ala
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Thr Ile Ser Gly Ser Ser Val Thr Ser Asn Gly Val Ser Ile Val
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Thr Asn Ser Glu Phe His Thr Thr Ser Ser Gly Ile Ser Thr Ala 80 85 90

Thr Asn Ser Glu Phe Ser Thr Ala Ser Ser Gly Ile Ser Ile Ala 95 100 105

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Phe	Leu	Ile	Thr	Leu 515	Val	Ser	Val	Val	Ala 520	Ala	Val	Gly	Leu	Phe 525
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Glu Val Gly Lys Ala Leu Asp Gly Ile Asn Ser Gly Ile Thr His
50 55 60

Ala Gly Arg Glu Val Glu Lys Val Phe Asn Gly Leu Ser Asn Met
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Gly Ser His Thr Gly Lys Glu Leu Asp Lys Gly Val Gln Gly Leu
80 85 90

Asn His Gly Met Asp Lys Val Ala His Glu Ile Asn His Gly Ile 95 100 105

Gly Gln Ala Gly Lys Glu Ala Glu Lys Leu Gly His Gly Val Asn 110 115 120

Asn Ala Ala Gly Gln Ala Gly Lys Glu Ala Asp Lys Ala Val Gln 125 130 135

Gly Phe His Thr Gly Val His Gln Ala Gly Lys Glu Ala Glu Lys 140 145 150

Leu Gly Gln Gly Val Asn His Ala Ala Asp Gln Ala Gly Lys Glu

Val Glu Lys Leu Gly Gln Gly Ala His His Ala Ala Gly Gln Ala 170 175 180

Gly Lys Glu Leu Gln Asn Ala His Asn Gly Val Asn Gln Ala Ser 185 190 195

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200 205 210

Ser Ser His Gln Gly Gly Ala Thr Thr Pro Leu Ala Ser Gly

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<211> 350

<212> PRT

<213> Homo sapiens

<400> 265

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Gln Asn Leu Asn His Tyr Ile Gln Val Leu Glu Asn Leu Val Arg
35 40 40

Ser Val Pro Ser Gly Glu Pro Gly Arg Glu Lys Lys Ser Asn Ser 50 55 60

Pro Lys His Val Tyr Ser Ile Ala Ser Lys Gly Ser Lys Phe Lys
65 70 75

Glu Leu Val Thr His Gly Asp Ala Ser Thr Glu Asn Asp Val Leu
80 85 90

Thr	Asn	Pro	Ile	Ser 95	Glu	Glu	Thr	Thr	Thr 100	Phe	Pro	Thr	Gly	Gly 105
Phe	Thr	Pro	Glu	Ile 110	Gly	Lys	Lys	Lys	His 115	Thr	Glu	Ser	Thr	Pro 120
Phe	Trp	Ser	Ile	Lys 125	Pro	Asn	Asn	Val	Ser 130	Ile	Val	Leu	His	Ala 135
Glu	Glu	Pro	Tyr	Ile 140	Glu	Asn	Glu	Glu	Pro 145	Glu	Pro	Glu	Pro	Glu 150
Pro	Ala	Ala	Lys	Gln 155	Thr	Glu	Ala	Pro	Arg 160	Met	Leu	Pro	Val	Val 165
Thr	Glu	Ser	Ser	Thr 170	Ser	Pro	Tyr	Val	Thr 175	Ser	Tyr	Lys	Ser	Pro 180
Val	Thr	Thr	Leu	Asp 185	Lys	Ser	Thr	Gly	Ile 190	Glu	Ile	Ser	Thr	Glu 195
Ser	Glu	Asp	Val	Pro 200	Gln	Leu	Ser	Gly	Glu 205	Thr	Ala	Ile	Glu	Lys 210
Pro	Glu	Glu	Phe	Gly 215	Lys	His	Pro	Glu	Ser 220	Trp	Àsn	Asn	Asp	Asp 225
Ile	Leu	Lys	Lys	Ile 230	Leu	Asp	Ile	Asn	Ser 235	Gln	Val	Gln	Gln	Ala 240
Leu	Leu	Ser	Asp	Thr 245	Ser	Asn	Pro	Ala	Tyr 250	Arg	Glu	Asp	Ile	Glu 255
Ala	Ser	Lys	Asp	His 260	Leu	Lys	Arg	Ser	Leu 265	Ala	Leu	Ala	Ala	Ala 270
Ala	Glu	His	Lys	Leu 275	Lys	Thr	Met	Tyr	Lys 280	Ser	Gln	Leu	Leu	Pro 285
Val	Gly	Arg	Thr	Ser 290	Asn	Lys	Ile	Asp	Asp 295	Ile	Glu	Thr	Val	Ile 300
Asn	Met	Leu	Cys	Asn 305	Ser	Arg	Ser	Lys	Leu 310	Tyr	Glu	Tyr	Leu	Asp 315
Ile	Lys	Cys	Val	Pro 320	Pro	Glu	Met	Arg	Glu 325	Lys	Ala	Ala	Thr	Val 330
Phe	Asn	Thr	Leu	Lys 335	Asn	Met	Cys	Arg	Ser 340	Arg	Arg	Val	Thr	Ala 345
Leu	Leu	Lys	Val	Tyr 350										

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<212> DNA

<213> Homo sapiens

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Met Ala Phe Val Leu Ile Leu Val Leu Ser Phe Tyr Glu Leu Val 1 5 10 15

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Leu Val Gly Glu Asp Ala Val Phe Ser Cys Ser Leu Phe Pro Glu

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<212> PRT

<213> Homo sapiens

<400> 267

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His Ala	Val	Val	His 65	Leu	Tyr	Arg	Asp	Gly 70	Glu	Asp	Trp	Glu	Ser 75
Lys Gln	Met	Pro	Gln 80	Tyr	Arg	Gly	Arg	Thr 85	Glu	Phe	Val	Lys	Asp 90
Ser Ile	Ala	Gly	Gly 95	Arg	Val	Ser	Leu	Arg 100	Leu	Lys	Asn	Ile	Thr 105
Pro Ser	Asp	Ile	Gly 110	Leu	Tyr	Gly	Cys	Trp 115	Phe	Ser	Ser	Gln	Ile 120
Tyr Asp	Glu	Glu	Ala 125	Thr	Trp	Glu	Leu	Arg 130	Val	Ala	Ala	Leu	Gly 135
Ser Leu	Pro	Leu	Ile 140	Ser	Ile	Val	Gly	Tyr 145	Val	Asp	Gly	Gly	Ile 150
Gln Leu	Leu	Cys	Leu 155	Ser	Ser	Gly	Trp	Phe 160	Pro	Gln	Pro	Thr	Ala 165
Lys Trp	Lys	Gly	Pro 170	Gln	Gly	Gln	Asp	Leu 175	Ser	Ser	Asp	Ser	Arg 180
Ala Asn	Ala	Asp	Gly 185	Tyr	Ser	Leu	Tyr	Asp 190	Val	Glu	Ile	Ser	Ile 195
Ile Val	Gln	Glu	Asn 200	Ala	Gly	Ser	Ile	Leu 205	Cys	Ser	Ile	His	Leu 210
Ala Glu	Gln	Ser	His 215	Glu	Val	Glu	Ser	Lys 220	Val	Leu	Ile	Gly	Glu 225
Thr Phe	Phe	Gln	Pro 230	Ser	Pro	Trp	Arg	Leu 235	Ala	Ser	Ile	Leu	Leu 240
Gly Leu	Leu	Cys	Gly 245	Ala	Leu	Cys	Gly	Val 250	Val	Met	Gly	Met	Ile 255
Ile Val	Phe	Phe	Lys 260	Ser	Lys	Gly	Lys	Ile 265	Gln	Ala	Glu	Leu	Asp 270
Trp Arg	Arg	Lys	His 275	Gly	Gln	Ala	Glu	Leu 280	Arg	Asp	Ala	Arg	Lys 285
His Ala	Val	Glu	Val 290	Thr	Leu	Asp	Pro	Glu 295	Thr	Ala	His	Pro	Lys 300
Leu Cys	Val	Ser	Asp 305	Leu	Lys	Thr	Val	Thr 310	His	Arg	Lys	Ala	Pro 315
Gln Glu	Val	Pro	His	Ser	Glu	Lys	Arg	Phe	Thr	Arg	Lys	Ser	Val

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Val	Ala	Ser	Gln	Gly 335	Phe	Gln	Ala	Gly	Arg 340	His	Tyr	Trp	Glu	Val 345
Asp	Val	Gly	Gln	Asn 350	Val	Gly	Trp	Tyr	Val 355	Gly	Val	Cys	Arg	Asp 360
Asp	Val	Asp	Arg	Gly 365	Lys	Asn	Asn	Val	Thr 370	Leu	Ser	Pro	Asn	Asn 375
Gly	Tyr	Trp	Val	Leu 380	Arg	Leu	Thr	Thr	Glu 385	His	Leu	Tyr	Phe	Thr 390
Phe	Asn	Pro	His	Phe 395	Ile	Ser	Leu	Pro	Pro 400	Ser	Thr	Pro	Pro	Thr 405
Arg	Val	Gly	Val	Phe 410	Leu	Asp	Tyr	Glu	Gly 415	Gly	Thr	Ile	Ser	Phe 420
Phe	Asn	Thr	Asn	Asp 425	Gln	Ser	Leu	Ile	Tyr 430	Thr	Leu	Leu	Thr	Cys 435
Gln	Phe	Glu	Gly	Leu 440	Leu	Arg	Pro	Tyr	Ile 445	Gln	His	Ala	Met	Tyr 450
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<210> 268 <211> 2103

<212> DNA

<213> Homo sapiens

<400> 268

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<211> 423

<212> PRT

<213> Homo sapiens

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Val Leu Ala Val Cys Ile Gly Leu Thr Val His Tyr Val Arg Tyr 35 40 45

Asn Gln Lys Lys Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr 50 55 60

Thr Asp Lys Leu Tyr Ala Glu Phe Gly Arg Glu Ala Ser Asn Asn 65 70 75

Phe Thr Glu Met Ser Gln Arg Leu Glu Ser Met Val Lys Asn Ala 80 85 90

Phe Tyr Lys Ser Pro Leu Arg Glu Glu Phe Val Lys Ser Gln Val 95 100 105

Ile Lys Phe Ser Gln Gln Lys His Gly Val Leu Ala His Met Leu 110 115 120

Leu Ile Cys Arg Phe His Ser Thr Glu Asp Pro Glu Thr Val Asp 125 130 135

Lys Ile Val Gln Leu Val Leu His Glu Lys Leu Gln Asp Ala Val 140 145 150

Gly Pro Pro Lys Val Asp Pro His Ser Val Lys Ile Lys Lys Ile 155 160 165

Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys Cys Gly Thr 170 175 180

Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val Gly Gly 185 190 195

Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu Gln 200 205 210

Trp	Asp	Gly	Ser	His 215	Arg	Суѕ	Gly	Ala	Thr 220	Leu	Ile	Asn	Ala	Thr 225
Trp	Leu	Val	Ser	Ala 230	Ala	His	Cys	Phe	Thr 235	Thr	Tyr	Lys	Asn	Pro 240
Ala	Arg	Trp	Thr	Ala 245	Ser	Phe	Gly	Val	Thr 250	Ile	Lys	Pro	Ser	Lys 255
Met	Lys	Arg	Gly	Leu 260	Arg	Arg	Ile	Ile	Val 265	His	Glu	Lys	Tyr	Lys 270
His	Pro	Ser	His	Asp 275	Tyr	Asp	Ile	Ser	Leu 280	Ala	Glu	Leu	Ser	Ser 285
Pro	Val	Pro	Tyr	Thr 290	Asn	Ala	Val	His	Arg 295	Val	Cys	Leu	Pro	Asp 300
Ala	Ser	Tyr	Glu	Phe 305	Gln	Pro	Gly	Asp	Val 310	Met	Phe	Val	Thr	Gly 315
Phe	Gly	Ala	Leu	Lys 320	Asn	Asp	Gly	Tyr	Ser 325	Gln	Asn	His	Leu	Arg 330
Gln	Ala	Gln	Val	Thr 335	Leu	Ile	Asp	Ala	Thr 340	Thr	Cys	Asn	Glu	Pro 345
Gln	Ala	Tyr	Asn	Asp 350	Ala	Ile	Thr	Pro	Arg 355	Met	Leu	Cys	Ala	Gly 360
Ser	Leu	Glu	Gly	Lys 365	Thr	Asp	Ala	Cys	Gln 370	Gly	Asp	Ser	Gly	Gly 375
Pro	Leu	Val	Ser	Ser 380	Asp	Ala	Arg	Asp	Ile 385	Trp	Tyr	Leu	Ala	Gly 390
Ile	Val	Ser	Trp	Gly 395	Asp	Glu	Cys	Ala	Lys 400	Pro	Asn	Lys	Pro	Gly 405
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<400> 270

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<211> 1170

<212> DNA

<213> Homo sapiens

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<210> 271

<211> 238

<212> PRT

<213> Homo sapiens

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Leu Val Pro Arg Ala Gln Pro Leu Ala Pro Gln Asp Phe Glu Glu
20 25 30

Glu Glu Ala Asp Glu Thr Glu Thr Ala Trp Pro Pro Leu Pro Ala
35 40 45

Val	Pro	Суѕ	Asp	Tyr 50	Asp	His	Cys	Arg	His 55	Leu	Gln	Val	Pro	Cys 60
Lys	Glu	Leu	Gln	Arg 65	Val	Gly	Pro	Ala	Ala 70	Суз	Leu	Cys	Pro	Gly 75
Leu	Ser	Ser	Pro	Ala 80	Gln	Pro	Pro	Asp	Pro 85	Pro	Arg	Met	Gly	Glu 90
Val	Arg	Ile	Ala	Ala 95	Glu	Glu	Gly	Arg	Ala 100	Val	Val	His	Trp	Cys 105
Ala	Pro	Phe	Ser	Pro 110	Val	Leu	His	Tyr	Trp 115	Leu	Leu	Leu	Trp	Asp 120
Gly	Ser	Glu	Ala	Ala 125	Gln	Lys	Gly	Pro	Pro 130	Leu	Asn	Ala	Thr	Val 135
Arg	Arg	Ala	Glu	Leu 140	Lys	Gly	Leu	Lys	Pro 145	Gly	Gly	Ile	Tyr	Val 150
Val	Cys	Val	Val	Ala 155	Ala	Asn	Glu	Ala	Gly 160	Ala	Ser	Arg	Val	Pro 165
Gln	Ala	Gly	Gly	Glu 170	Gly	Leu	Glu	Gly	Ala 175	Asp	Ile	Pro	Ala	Phe 180
Gly	Pro	Cys	Ser	Arg 185	Leu	Ala	Val	Pro	Pro 190	Asn	Pro	Arg	Thr	Leu 195
Val	His	Ala	Ala	Val 200	Gly	Val	Gly	Thr	Ala 205	Leu	Ala	Leu	Leu	Ser 210
Cys	Ala	Ala	Leu	Val 215	Trp	His	Phe	Cys	Leu 220	Arg	Asp	Arg	Trp	Gly 225
Cys	Pro	Arg	Arg	Ala 230	Ala	Ala	Arg	Ala	Ala 235	Gly	Ala	Leu		
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<400> 272

<213> Homo sapiens

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tgeeettggg agtaggatgt ggtgaaagga tggggettet eeettaeggg 200
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<211> 305

<212> PRT

<213> Homo sapiens

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Thr Ala Glu Thr Arg Val Glu Glu Ala Val Ile Leu Thr Tyr Phe 50 55 60

Pro Val Val His Pro Val Met Ile Ala Val Cys Cys Phe Leu Ile
65 70 75

Ile Val Gly Met Leu Gly Tyr Cys Gly Thr Val Lys Arg Asn Leu 80 85 90

Leu Leu Leu Ala Trp Tyr Phe Gly Ser Leu Leu Val Ile Phe Cys 95 100 105

Val Glu Leu Ala Cys Gly Val Trp Thr Tyr Glu Gln Glu Leu Met 110 115 120

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Asn	Phe	Phe	Gln	Arg 155	Glu	Phe	Lys	Cys	Cys 160	Gly	Val	Val	Tyr	Phe 165
Thr	Asp	Trp	Leu	Glu 170	Met	Thr	Glu	Met	Asp 175	Trp	Pro	Pro	Asp	Ser 180
Cys	Cys	Val	Arg	Glu 185	Phe	Pro	Gly	Суз	Ser 190	Lys	Gln	Ala	His	Gln 195
Glu	Asp	Leu	Ser	Asp 200	Leu	Tyr	Gln	Glu	Gly 205	Суѕ	Gly	Lys	Lys	Met 210
Tyr	Ser	Phe	Leu	Arg 215	Gly	Thr	Lys	Gln	Leu 220	Gln	Val	Leu	Arg	Phe 225
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Thr	Ile	Thr	Leu	Leu 245	Trp	Ala	Leu	Tyr	Tyr 250	Asp	Arg	Arg	Glu	Pro 255
Gly _.	Thr	Asp	Gln	Met 260	Met	Ser	Leu	Lys	Asn 265	Asp	Asn	Ser	Gln	His 270
Leu	Ser	Суѕ	Pro	Ser 275	Val	Glu	Leu	Leu	Lys 280	Pro	Ser	Leu	Ser	Arg 285
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Lys Val Gly Ile Pro Ile Ile Ile Ala Leu Leu Ser Leu Ala Ser 35 40 45

Ile Ile Ile Val Val Leu Ile Lys Val Ile Leu Asp Lys Tyr 50 55 60

Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln 65 70 75

Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu 80 85 90

His Cys Val Lys Ser Phe Pro Glu Gly Pro Ala Val Ala Val Arg 95 100 105

Leu Ser Lys Asp Arg Ser Thr Leu Gln Val Leu Asp Ser Ala Thr
110 115 120

Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu 125 130 135

Ala Glu Thr Ala Cys Arg Gln Met Gly Tyr Ser Arg Ala Val Glu 140 145 150

Ile Gly Pro Asp Gln Asp Leu Asp Val Val Glu Ile Thr Glu Asn 155 160 165

Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu Ser 170 175 180

Gly Ser Let	Val Ser 185		His	Cys	Leu	Ala 190	Cys	Gly	Lys	Ser	Leu 195
Lys Thr Pro	Arg Val		Gly	Gly	Glu	Glu 205	Ala	Ser	Val	Asp	Ser 210
Trp Pro Trp	Gln Val 215		Ile	Gln	Tyr	Asp 220	Lys	Gln	His	Val	Cys 225
Gly Gly Ser	Ile Leu 230	_	Pro	His	Trp	Val 235	Leu	Thr	Ala	Ala	His 240
Cys Phe Arc	Lys His 245		Asp	Val	Phe	Asn 250	Trp	Lys	Val	Arg	Ala 255
Gly Ser Asp	Lys Leu 260	_	Ser	Phe	Pro	Ser 265	Leu	Ala	Val	Ala	Lys 270
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Gly Gly Lys	Met Ser 335	_	Ile	Leu	Leu	Gln 340	Ala	Ser	Val	Gln	Val 345
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35 40 45

Ala Gly Asp Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly
50 55 60

Leu Gln Asp Phe Asp Thr Leu Leu Leu Ser Gly Asp Gly Asn Thr
65 70 75

Leu Tyr Val Gly Ala Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln
80 85 90

Asp Pro Gly Val Pro Arg Leu Lys Asn Met Ile Pro Trp Pro Ala 95 100 105

Ser Asp Arg Lys Lys Ser Glu Cys Ala Phe Lys Lys Ser Asn 110 115 120

Glu Thr Gln Cys Phe Asn Phe Ile Arg Val Leu Val Ser Tyr Asn 125 130 135

Val Thr His Leu Tyr Thr Cys Gly Thr Phe Ala Phe Ser Pro Ala

Cys Thr Phe Ile Glu Leu Gln Asp Ser Tyr Leu Leu Pro Ile Ser

Glu Asp Lys Val Met Glu Gly Lys Gly Gln Ser Pro Phe Asp Pro 170 175 180

Ala His Lys His Thr Ala Val Leu Val Asp Gly Met Leu Tyr Ser 185 190 195

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Trp	Leu	His	His	Asp 230	Ala	Ser	Phe	Val	Ala 235	Ala	Ile	Pro	Ser	Thr 240
Gln	Val	Val	Tyr	Phe 245	Phe	Phe	Glu	Glu	Thr 250	Ala	Ser	Glu	Phe	Asp 255
Phe	Phe	Glu	Arg	Leu [.] 260	His	Thr	Ser	Arg	Val 265	Ala	Arg	Val	Суз	Lys 270
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Pro	Leu	Leu	,Val	Lys 410	Ser	Gly	Val	Glu	Tyr 415	Thr	Arg	Leu	Ala	Val 420
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Asp	Ser	Ser	Ala	His 455	Leu	Val	Glu	Glu	Ile 460	Gln	Leu	Phe	Pro	Asp 465
Pro	Glu	Pro	Val	Arg 470	Asn	Leu	Gln	Leu	Ala 475	Pro	Thr	Gln	Gly	Ala 480

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Leu	Gln	Ser	Pro	Lys 740	Glu	Cys	Arg	Thr	Ser 745	Ala	Ser	Asp	Val	Asp 750
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<211> 523

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<400> 282

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Gly Val Leu Ser Glu Ala Ala Lys Ile Leu Thr Ile Ser Thr 20 25 30

Val Gly Gly Ser His Tyr Leu Leu Met Asp Arg Val Ser Gln Ile 35 40 45

Leu Gln Asp His Gly His Asn Val Thr Met Leu Asn His Lys Arg
50 55 60

Gly Pro Phe Met Pro Asp Phe Lys Lys Glu Glu Lys Ser Tyr Gln
65 70 75

Val Ile Ser Trp Leu Ala Pro Glu Asp His Gln Arg Glu Phe Lys 80 85 90

Lys Ser Phe Asp Phe Phe Leu Glu Glu Thr Leu Gly Gly Arg Gly
95 100 105

Lys Phe Glu Asn Leu Leu Asn Val Leu Glu Tyr Leu Ala Leu Gln
110 115 120

Cys Ser His Phe Leu Asn Arg Lys Asp Ile Met Asp Ser Leu Lys 125 130 135

Asn Glu Asn Phe Asp Met Val Ile Val Glu Thr Phe Asp Tyr Cys 140 145 150

Pro Phe Leu Ile Ala Glu Lys Leu Gly Lys Pro Phe Val Ala Ile

				155					160					165
Leu	Ser	Thr	Ser	Phe 170	Gly	Ser	Leu	Glu	Phe 175	Gly	Leu	Pro	Ile	Pro 180
Leu	Ser	Tyr	Val	Pro 185	Val	Phe	Arg	Ser	Leu 190	Leu	Thr	Asp	His	Met 195
Asp	Phe	Trp	Gly	Arg 200	Val	Lys	Asn	Phe	Leu 205	Met	Phe	Phe	Ser	Phe 210
Cys	Arg	Arg	Gln	Gln 215	His	Met	Gln	Ser	Thr 220	Phe	Asp	Asn	Thr	Ile 225
Lys	Glu	His	Phe	Thr 230	Glu	Gly	Ser	Arg	Pro 235	Val	Leu	Ser	His	Leu 240
Leu	Leu	Lys	Ala	Glu 245	Leu	Trp	Phe	Ile	Asn 250	Ser	Asp	Phe	Ala	Phe 255
Asp	Phe	Ala	Arg	Pro 260	Leu	Leu	Pro	Asn	Thr 265	Val	Tyr	Val	Gly	Gly 270
Leu	Met	Glu	Lys	Pro 275	Ile	Lys	Pro	Val	Pro 280	Gln	Asp	Leu	Glu	Asn 285
Phe	Ile	Ala	Lys	Phe 290	Gly	Asp	Ser	Gly	Phe 295	Val	Leu	Val	Thr	Leu 300
Gly	Ser	Met	Val	Asn 305	Thr	Cys	Gln	Asn	Pro 310	Glu	Ile	Phe	Lys	Glu 315
Met	Asn	Asn	Ala	Phe 320	Ala	His	Leu	Pro	Gln 325	Gly	Val	Ile	Trp	Lys 330
Cys	Gln	Cys	Ser	His 335	Trp	Pro	Lys	Asp	Val 340	His	Leu	Ala	Ala	Asn 345
Val	Lys	Ile	Val	Asp 350	Trp	Leu	Pro	Gl'n	Ser 355	Asp	Leu	Leu	Ala	His 360
Pro	Ser	Ile	Arg	Leu 365	Phe	Val	Thr	His	Gly 370	Gly	Gln	Asn	Ser	Ile 375
Met	Glu	Ala	Ile	Gln 380	His	Gly	Val	Pro	Met 385	Val	Gly	Ile	Pro	Leu 390
Phe	Gly	Asp	Gln	Pro 395	Glu	Asn	Met	Val	Arg 400	Val	Glu	Ala	Lys	Lys 405
Phe	Gly	Val	Ser	Ile 410	Gln	Leu	Lys	Lys	Leu 415	Lys	Ala	Glu	Thr	Leu 420
Ala	Leu	Lys	Met	Lys 425	Gln	Ile	Met	Glu	Asp 430	Lys	Arg	Tyr	Lys	Ser 435
71.	7.7.	17-1	ת ד ת	ת ז ה	802	W-1	т10	T 011	λκα	Sor	Hic	Pro	T.011	Sar

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450
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 Pro Thr Gln Arg Leu Val Gly Trp Ile Asp His Val Leu Gln Thr
 Gly Gly Ala Thr His Leu Lys Pro Tyr Val Phe Gln Gln Pro Trp
                                      475
 His Glu Gln Tyr Leu Phe Asp Val Phe Val Phe Leu Leu Gly Leu
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<211> 205

<212> PRT

<213> Homo sapiens

<400> 287

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Pro Gly Leu Pro Leu Val Leu Val Leu Leu Ala Leu Gly Ala Gly 20 25 30

Trp Ala Gln Glu Gly Ser Glu Pro Val Leu Leu Glu Gly Glu Cys
35 40 45

Leu Val Val Cys Glu Pro Gly Arg Ala Ala Ala Gly Gly Pro Gly 50 55 60

Gly Ala Ala Leu Gly Glu Ala Pro Pro Gly Arg Val Ala Phe Ala 65 70 75

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Ala Val Arg Ser His His His Glu Pro Ala Gly Glu Thr Gly Asn
Gly Thr Ser Gly Ala Ile Tyr Phe Asp Gln Val Leu Val Asn Glu
Gly Gly Gly Phe Asp Arg Ala Ser Gly Ser Phe Val Ala Pro Val
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Arg Gly Val Tyr Ser Phe Arg Phe His Val Val Lys Val Tyr Asn
                                     130
Arg Gln Thr Val Gln Val Ser Leu Met Leu Asn Thr Trp Pro Val
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Ile Ser Ala Phe Ala Asn Asp Pro Asp Val Thr Arg Glu Ala Ala
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Thr Ser Ser Val Leu Leu Pro Leu Asp Pro Gly Asp Arg Val Ser
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Leu Arg Leu Arg Arg Gly Asn Leu Leu Gly Gly Trp Lys Tyr Ser
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Ser Phe Ser Gly Phe Leu Ile Phe Pro Leu
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<223> Synthetic oligonucleotide probe
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<210> 292 <211> 388

<212> PRT

<213> Homo sapiens

<400> 292

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Arg Gln Ala Glu Ala Asp Arg Ser Gln Arg Ser His Gly Gly Pro 20 25 30

Ala Leu Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser 35 40 45

Ile Leu Ser Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asn 50 55 60

Arg Ser Lys Val Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln
65 70 75

Trp Val Leu Ser Phe Leu Val Leu Gly Val Ala Cys Ser Ala Ile 80 85 90

Leu Met Tyr Ile Phe Cys Thr Asp Cys Trp Leu Ile Ala Val Leu 95 100 105

Tyr Phe Thr Trp Leu Val Phe Asp Trp Asn Thr Pro Lys Lys Gly
110 115 120

Gly Arg Arg Ser Gln Trp Val Arg Asn Trp Ala Val Trp Arg Tyr 125 130 135

Phe Arg Asp Tyr Phe Pro Ile Gln Leu Val Lys Thr His Asn Leu 140 145 150

Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr His Pro His Gly Ile 155 160 165

Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr Glu Ala Thr Glu 170 175 180

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Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu Ala Thr Leu
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                                      190
Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu Met Ser
                                      205
 Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu Leu
                                      220
 Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Ile Val Val Gly Gly
                 230
                                      235
Ala Ala Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr
                                      250
 Leu Arg Asn Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly
                                      265
                 260
Ala Asp Leu Val Pro Ile Tyr Ser Phe Gly Glu Asn Glu Val Tyr
                                                          285
                                      280
                 275
Lys Gln Val Ile Phe Glu Glu Gly Ser Trp Gly Arg Trp Val Gln
 Lys Lys Phe Gln Lys Tyr Ile Gly Phe Ala Pro Cys Ile Phe His
                                      310
                                                          315
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 Gly Arg Gly Leu Phe Ser Ser Asp Thr Trp Gly Leu Val Pro Tyr
                                      325
                 320
 Ser Lys Pro Ile Thr Thr Val Val Gly Glu Pro Ile Thr Ile Pro
                                      340
                 335
Lys Leu Glu His Pro Thr Gln Gln Asp Ile Asp Leu Tyr His Thr
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Lys Phe Gly Leu Pro Glu Thr Glu Val Leu Glu Val Asn
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<210> 294
<211> 24
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<212> DNA

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 cccacagaca cccatgacac ttcc 24
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<213> Homo sapiens

<400> 297

Met Gly Leu Leu Ala Phe Leu Lys Thr Gln Phe Val Leu His Leu 1 5 10 15

Leu Val Gly Phe Val Phe Val Val Ser Gly Leu Val Ile Asn Phe 20 25 30

Val Gln Leu Cys Thr Leu Ala Leu Trp Pro Val Ser Lys Gln Leu 35 40 45

Tyr Arg Arg Leu Asn Cys Arg Leu Ala Tyr Ser Leu Trp Ser Gln
50 55 60

Leu Val Met Leu Leu Glu Trp Trp Ser Cys Thr Glu Cys Thr Leu 65 70 75

Phe Thr Asp Gln Ala Thr Val Glu Arg Phe Gly Lys Glu His Ala

				80					85					90
Val	Ile	Ile	Leu	Asn 95	His	Asn	Phe	Glu	Ile 100	Asp	Phe	Leu	Cys	Gly 105
Trp	Thr	Met	Cys	Glu 110	Arg	Phe	Gly	Val	Leu 115	Gly	Ser	Ser	Lys	Val 120
Leu	Ala	Lys	Lys	Glu 125	Leu	Leu	Tyr	Val	Pro 130	Leu	Ile	Gly	Trp	Thr 135
Trp	Tyr	Phe	Leu	Glu 140	Ile	Val	Phe	Cys	Lys 145	Arg	Lys	Trp	Glu	Glu 150
Asp	Arg	Asp	Thr	Val 155	Val	Glu	Gly	Leu	Arg 160	Arg	Leu	Ser	Asp	Tyr 165
Pro	Glu	Tyr	Met	Trp 170	Phe	Leu	Leu	Tyr	Cys 175	Glu	Gly	Thr	Arg	Phe 180
Thr	Glu	Thr	Lys	His 185	Arg	Val	Ser	Met	Glu 190	Val	Ala	Ala	Ala	Lys 195
Gly	Leu	Pro	Val	Leu 200	Lys	Tyr	His	Leu	Leu 205	Pro	Arg	Thr	Lys	Gly 210
Phe	Thr	Thr	Ala	Val 215	Lys	Cys	Leu	Arg	Gly 220	Thr	Val	Ala	Ala	Val 225
Tyr	Asp	Val	Thr	Leu 230	Asn	Phe	Arg	Gly	Asn 235	Lys	Asn	Pro	Ser	Leu 240
Leu	Gly	Ile	Leu	Tyr 245	Gly	Lys	Lys	Tyr	Glu 250	Ala	Asp	Met	Cys	Val 255
Arg	Arg	Phe	Pro	Leu 260	Glu	Asp	Ile	Pro	Leu 265	Asp	Glu	Lys	Glu	Ala 270
Ala	Gln	Trp	Leu	His 275	Lys	Leu	Tyr	Gln	Glu 280	Lys	Asp	Ala	Leu	Gln 285
Glu	Ile	Tyr	Asn	Gln 290	Lys	Gly	Met	Phe	Pro 295	Gly	Glu	Gln	Phe	Lys 300
Pro	Ala	Arg	Arg	Pro 305	Trp	Thr	Leu	Leu	Asn 310	Phe	Leu	Ser	Trp	Ala 315
Thr	Ile	Leu	Leu	Ser 320	Pro	Leu	Phe	Ser	Phe 325	Val	Leu	Gly	Val	Phe 330
Ala	Ser	Gly	Ser	Pro 335	Leu	Leu	Ile	Leu	Thr 340	Phe	Leu	Gly	Phe	Val 345
Gly	Ala	Ala	Ser	Phe 350	Gly	Val	Arg	Arg	Leu 355	Ile	Gly	Glu	Ser	Leu 360
Glu	Pro	Glv	Δra	Tro	Ara	Len	Gln							

365

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<211> 24
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<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 298
cttcctctgt gggtggacca tgtg 24
<210> 299
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<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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gccacctcca tgctaacgcg g 21
<210> 300
<211> 45
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 300
ccaaggteet egetaagaag gagetgetet aegtgeeeet categ 45
<210> 301
<211> 1334
<212> DNA
<213> Homo sapiens
<400> 301
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 tgtcctgggg cagccaccag gcatattcat ctttgtgtgt gtttttcttt 100
 tgctttagca ctggggcact tcttgcttat ttctttggta ggaaaggggc 150
 tcagtttgtc ttgtggggtt ggtggcaggc aggccggctt acgcctgata 200
 cggccctggg ttagaaggga agggaagata aacttttata caaatgggga 250
 tagctggggt ctgagacctg cttcctcagt aaaattcctg ggatctgcct 300
 ataccttctt ttctctaacc tggcataccc tgcttaaagc ctctcagggc 350
 ttctctctgt tcttaggatc aaagtattta gagctacaag agccctcatg 400
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gtetggeece tgeecectg geeagettea ttgtacatgt ggtgttetet 450 tgtcgttcct gtaatgtggt atgccatggg gtctttgcac aagcctttcc 500 totttggctg gacactgttc cctgcccccc ccatactctt cctacttaat 550 atgtagtcat cctgcagatt tcaattctaa catcattttc tccagggatc 600 ctggcctgac agaatctcat cttgtttaat gctctcataa gaccacttgt 650 ttcccttttg cagcacttgc cactcagttg tatctttatg tgcgtttgtg 700 gttgtatggg ttgtgtctgt tccccagaat gcccagctct gagctgcgtg 750 agggtcaagg gcattgctgt gcctgccagg tatagtgcct acatgtggtg 800 ggtgctcatg ttttagagac taaatggagg aggagatgag gaaaagattg 850 aaatctctca gttcaccaga tggtgtaggg cccagcattg taaattcaca 900 cgttgactgt gcttgtgaat tatctgggga tgcaggtcct gattcagtag 950 gcccaggttg ggcatctcta acaaactccc acgtgatgct gatgctggtc 1000 ctatgaacta tactaaatag taagaatcta tggagccagg ctgggcatgg 1050 tggctcacac ctatgatccc agcactttgg gaggctgagg caggctgatc 1100 acctggagtc aggatttcaa gactagcctg gccaacatgg tggaacccca 1150 tctgtactaa aaatacacaa attagctggg catggtggca catgcctgta 1200 gtcccagcta cttgggaggc tgaagcaaga gaatcgcttg aacctgggag 1250 geggaggttg cagtgageeg agateaggee aetgtattee aaceagggtg 1300 acagagtgag actctatgtc caaaaaaaaa aaaa 1334

<210> 302

<211> 143

<212> PRT

<213> Homo sapiens

<400> 302

Met His His Ser Leu Gln Cys Pro Gly Ala Ala Thr Arg His Ile 1 5 10 15

His Leu Cys Val Cys Phe Ser Phe Ala Leu Ala Leu Gly His Phe 20 25 30

Leu Leu Ile Ser Leu Val Gly Lys Gly Leu Ser Leu Ser Cys Gly 35 40 45

Val Gly Gly Arg Gln Ala Gly Leu Arg Leu Ile Arg Pro Trp Val 50 55 60

Arg Arg Glu Gly Lys Ile Asn Phe Tyr Thr Asn Gly Asp Ser Trp

Gly Leu Arg Pro Ala Ser Ser Val Lys Phe Leu Gly Ser Ala Tyr 90

Thr Phe Phe Ser Leu Thr Trp His Thr Leu Leu Lys Ala Ser Gln 100

Gly Phe Ser Leu Phe Leu Gly Ser Lys Tyr Leu Glu Leu Gln Glu 115

Pro Ser Trp Ser Gly Pro Cys Pro Pro Gly Gln Leu His Cys Thr 135

Cys Gly Val Leu Leu Ser Phe Leu

<210> 303

<211> 1768

<212> DNA

<213> Homo sapiens

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gttgggttat cacaaggcat cgagtctcct gcattcagtg gacatgtggg 900 ggaagggetg ecgatggege atgacaeat egggaeteae etetggggee 950 atcagacage cgtttccgcc ccgatccacg taccagetgc tgaagggcaa 1000 ctgcaggccg atgctctcat cagccaggca gcagccaaaa tctgcgatca 1050 ccagccaggg gcagccgtct gggaaggagc aagcaaagtg accatttctc 1100 ctccctcct tccctctgag aggecctcct atgtccctac taaagccacc 1150 agcaagacat agctgacagg ggctaatggc tcagtgttgg cccaggaggt 1200 cagcaaggcc tgagagctga tcagaagggc ctgctgtgcg aacacggaaa 1250 tgcctccagt aagcacaggc tgcaaaatcc ccaggcaaag gactgtgtgg 1300 ctcaatttaa atcatgttct agtaattgga gctgtcccca agaccaaagg 1350 agctagaget tggttcaaat gatetecaag ggeeettata eeccaggaga 1400 ctttgatttg aatttgaaac cccaaatcca aacctaagaa ccaggtgcat 1450 taaqaatcaq ttattqccqq qtqtqqtqqc ctqtaatqcc aacattttqq 1500 gaggeegagg egggtagate acetgaggte aggagtteaa gaceageetg 1550 gccaacatgg tgaaacccct gtctctacta aaaatacaaa aaaactagcc 1600 aggcatggtg gtgtgtgcct gtatcccagc tactcgggag gctgagacag 1650 qaqaattact tqaacctqqq aqqtqaaqqa ggctqaqaca ggaqaatcac 1700 ttcagcctga gcaacacagc gagactctgt ctcagaaaaa ataaaaaaag 1750 aattatggtt atttgtaa 1768

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<210> 304
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<400> 304

Met	Leu	Trp	Trp	Leu	Val	Leu	Leu	Leu	Leu	Pro	Thr	Leu	Lys	Ser
1				5					10					15

Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro

<211> 109

<212> PRT

<213> Homo sapiens

65 70 75

Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala 80 85 90

Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly
95 100 105

Arg Arg Arg Asp

<210> 305

<211> 989

<212> DNA

<213> Homo sapiens

<400> 305

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<210> 306
<211> 262
<212> PRT
<213> Homo sapiens
<400> 306
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Leu Gly Ser Ala Ala Leu Gly Ala Ala Phe Ala Thr Gly Leu Phe
 Leu Gly Arg Arg Cys Pro Pro Trp Arg Gly Arg Arg Glu Gln Cys
                  35
Leu Leu Pro Pro Glu Asp Ser Arg Leu Trp Gln Tyr Leu Leu Ser
 Arg Ser Met Arg Glu His Pro Ala Leu Arg Ser Leu Arg Leu Leu
 Thr Leu Glu Gln Pro Gln Gly Asp Ser Met Met Thr Cys Glu Gln
Ala Gln Leu Leu Ala Asn Leu Ala Arg Leu Ile Gln Ala Lys Lys
Ala Leu Asp Leu Gly Thr Phe Thr Gly Tyr Ser Ala Leu Ala Leu
                                      115
                 110
Ala Leu Ala Leu Pro Ala Asp Gly Arg Val Val Thr Cys Glu Val
Asp Ala Gln Pro Pro Glu Leu Gly Arg Pro Leu Trp Arg Gln Ala
                                     145
 Glu Ala Glu His Lys Ile Asp Leu Arg Leu Lys Pro Ala Leu Glu
 Thr Leu Asp Glu Leu Leu Ala Ala Gly Glu Ala Gly Thr Phe Asp
                 170
                                     175
Val Ala Val Val Asp Ala Asp Lys Glu Asn Cys Ser Ala Tyr Tyr
                                     190
Glu Arg Cys Leu Gln Leu Leu Arg Pro Gly Gly Ile Leu Ala Val
                                                          210
                 200
Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln Pro Pro Lys Gly
Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu Arg Ile Arg
                 230
Arg Asp Val Arg Val Tyr Ile Ser Leu Leu Pro Leu Gly Asp Gly
                                     250
                                                          255
                 245
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Leu Thr Leu Ala Phe Lys Ile 260

<210> 307

<211> 2272

<212> DNA

<213> Homo sapiens

<400> 307

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gcccgtcaag aagcggggac gcaagggccg gggccggggt cccccgtcct 1250 cctctgactc cgagcccgag gccgagctgg agagagaggc caagaaatca 1300 gcgaagaagc cgcagtcctc aagcacagag cccgccagga aacctggcca 1350 gaaggagaag agagtgegge eegaggagaa geaacaagee aageeegtga 1400 aggtggagcg gacccggaag cggtccgagg gcttctcgat ggacaggaag 1450 qtaqaqaaqa agaaagagcc ctccgtggag gagaagctgc agaagctgca 1500 cagtgagate aagtttgeee taaaggtega cageeeggae gtgaagaggt 1550 gcctgaatgc cctagaggag ctgggaaccc tgcaggtgac ctctcagatc 1600 ctccagaaga acacagacgt ggtggccacc ttgaagaaga ttcgccgtta 1650 caaagcgaac aaggacgtaa tggagaaggc agcagaagtc tatacccggc 1700 tcaagtcgcg ggtcctcggc ccaaagatcg aggcggtgca gaaagtgaac 1750 aaggctggga tggagaagga gaaggccgag gagaagctgg ccggggagga 1800 gctggccggg gaggaggcc cccaggagaa ggcggaggac aagcccagca 1850 ccgatctctc agccccagtg aatggcgagg ccacatcaca gaagggggag 1900 agegeagagg acaaggagea egaggaggt egggaetegg aggagggee 1950 aaqqtqtqqc tcctctqaaq acctqcacqa caqcqtacqq gaqqqtcccq 2000 acctggacag gcctgggagc gaccggcagg agcgcgagag ggcacggggg 2050 gacteggagg ecetggaega ggagagetga geeggggea geeaggeeca 2100 gcccccgccc gagctcaggc tgcccctctc cttccccggc tcgcaggaga 2150 gcagagcaga gaactgtggg gaacgctgtg ctgtttgtat ttgttccctt 2200 gggttttttt ttcctgccta atttctgtga tttccaacca acatgaaatg 2250 actataaacg gttttttaat ga 2272

Met Pro His Ala Phe Lys Pro Gly Asp Leu Val Phe Ala Lys Met
1 5 10 15

Lys Gly Tyr Pro His Trp Pro Ala Arg Ile Asp Asp Ile Ala Asp 20 25 30

Gly Ala Val Lys Pro Pro Pro Asn Lys Tyr Pro Ile Phe Phe

<210> 308

<211> 671

<212> PRT

<213> Homo sapiens

<400> 308

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Tyr	Asp	Lys	Cys	Lys 65	Asp	Lys	Tyr	Gly	Lys 70	Pro	Asn	Lys	Arg	Lys 75
Gly	Phe	Asn	Glu	Gly 80	Leu	Trp	Glu	Ile	Gln 85	Asn	Asn	Pro	His	Ala 90
Ser	Tyr	Ser	Ala	Pro 95	Pro	Pro	Val	Ser	Ser 100	Ser	Asp	Ser	Glu	Ala 105
Pro	Glu	Ala	Asn	Pro 110	Ala	Asp	Gly	Ser	Asp 115	Ala	Asp	Glu	Asp	Asp 120
Glu	Asp	Arg	Gly	Val 125	Met	Ala	Val	Thr	Ala 130	Val	Thr	Ala	Thr	Ala 135
Ala	Ser	Asp	Arg	Met 140	Glu	Ser	Asp	Ser	Asp 145	Ser	Asp	Lys	Ser	Ser 150
Asp	Asn	Ser	Gly _,	Leu 155	Lys	Arg	Lys	Thr	Pro 160	Ala	Leu	Lys	Met	Ser 165
Val	Ser	Lys	Arg	Ala 170	Arg	Lys	Ala	Ser	Ser 175	Asp	Leu	Asp	Gln	Ala 180
Ser	Val	Ser	Pro	Ser 185	Glu	Glu	Glu	Asn	Ser 190	Glu	Ser	Ser	Ser	Glu 195
Ser	Glu	Lys	Thr	Ser 200	Asp	Gln	Asp	Phe	Thr 205	Pro	Glu	Lys	Lys	Ala 210
Ala	Val	Arg	Ala	Pro 215	Arg	Arg	Gly	Pro	Leu 220	Gly	Gly	Arg	Lys	Lys 225
Lys	Lys	Ala	Pro	Ser 230	Ala	Ser	Asp	Ser	Asp 235	Ser	Lys	Ala	Asp	Ser 240
Asp	Gly	Ala	Lys	Pro 245	Glu	Pro	Val	Ala	Met 250	Ala	Arg	Ser	Ala	Ser 255
Ser	Ser	Ser	Ser	Ser 260	Ser	Ser	Ser	Ser	Asp 265	Ser	Asp	Val	Ser	Val 270
Lys	Lys	Pro	Pro	Arg 275	Gly	Arg	Lys	Pro	Ala 280	Glu	Lys	Pro	Leu	Pro 285
Lys	Pro	Arg	Gly	Arg 290	Lys	Pro	Lys	Pro	Glu 295	Arg	Pro	Pro	Ser	Ser 300
Ser	Ser	Ser	Asp	Ser 305	Asp	Ser	Asp	Glu	Val 310	Asp	Arg	Ile	Ser	Glu 315
Trp	Lys	Arg	Arg	Asp	Glu	Ala	Arg	Arg	Arg	Glu	Leu	Glu	Ala	Arg

		320				325					330
Arg Arg Arg		Gln G 335	Glu Glu	Glu	Leu	Arg 340	Arg	Leu	Arg	Glu	Gln 345
Glu Lys Glu		Lys G 350	Glu Arg	Arg	Arg	Glu 355	Arg	Ala	Asp	Arg	Gly 360
Glu Ala Glu		Gly S 365	Ser Gly	Gly	Ser	Ser 370	Gly	Asp	Glu	Leu	Arg 375
Glu Asp Asp		Pro V 380	al Lys	Lys	Arg	Gly 385	Arg	Lys	Gly	Arg	Gly 390
Arg Gly Pro		Ser S 395	Ser Ser	Asp	Ser	Glu 400	Pro	Glu	Ala	Glu	Leu 405
Glu Arg Glu		Lys L 410	ys Ser	Ala	Lys	Lys 415	Pro	Gln	Ser	Ser	Ser 420
Thr Glu Pro		Arg L 425	ys Pro	Gly	Gln	Lys 430	Glu	Lys	Arg	Val	Arg 435
Pro Glu Glu		Gln G 440	Sln Ala	Lys	Pro	Val 445	Lys	Val	Glu	Arg	Thr 450
Arg Lys Arg		Glu G 455	Sly Phe	Ser	Met	Asp 460	Arg	Lys	Val	Glu	Lys 465
Lys Lys Glu		Ser V 470	al Glu	Glu	Lys	Leu 475	Gln	Lys	Leu	His	Ser 480
Glu Ile Lys	Pho 7	Ala L	eu Lys	Val	Asp		Pro	Asp	Val	Lys	Arg 495
		485				490					.,,
Cys Leu Asn	Ala l	485	Slu Glu	Leu			Leu	Gln		Thr	
	Ala i	485 Leu G 500			Gly	Thr 505			Val		Ser 510
Cys Leu Asn	Ala i	485 Leu G 500 Lys A 515	sn Thr	Asp	Gly Val	Thr 505 Val 520	Ala	Thr	Val Leu	Lys	Ser 510 Lys 525
Cys Leu Asn	Ala is seen a se	485 Leu G 500 Lys A 515 Lys A	asn Thr	Asp	Gly Val Asp	Thr 505 Val 520 Val 535	Ala Met	Thr Glu	Val Leu Lys	Lys Ala	Ser 510 Lys 525 Ala
Cys Leu Asn Gln Ile Leu Ile Arg Arg	Ala i i i i i i i i i i i i i i i i i i i	485 Leu G 500 Lys A 515 Lys A 530 Arg L	asn Thr ala Asn eu Lys	Asp Lys Ser	Gly Val Asp Arg	Thr 505 Val 520 Val 535 Val 550	Ala Met Leu	Thr Glu Gly	Val Leu Lys Pro	Lys Ala Lys	Ser 510 Lys 525 Ala 540 Ile 555
Cys Leu Asn Gln Ile Leu Ile Arg Arg Glu Val Tyr	Ala is a second of the second	485 Leu G 500 Lys A 515 Lys A 530 Arg L 545 Lys V	asn Thr ala Asn Leu Lys Val Asn	Asp Lys Ser	Gly Val Asp Arg	Thr 505 Val 520 Val 535 Val 550 Gly 565	Ala Met Leu Met	Thr Glu Gly Glu	Val Leu Lys Pro	Lys Ala Lys Glu	Ser 510 Lys 525 Ala 540 Ile 555 Lys 570
Cys Leu Asn Gln Ile Leu Ile Arg Arg Glu Val Tyr Glu Ala Val	Ala i	485 Leu G 500 Lys A 515 Lys A 530 Arg L 545 Lys V	Asn Thr Ala Asn Geu Lys Yal Asn	Asp Lys Ser Lys	Gly Val Asp Arg Ala Glu	Thr 505 Val 520 Val 535 Val 550 Gly 565 Leu 580	Ala Met Leu Met	Thr Glu Gly Glu Gly	Val Leu Lys Pro Lys Glu	Lys Ala Lys Glu Glu	Ser 510 Lys 525 Ala 540 Ile 555 Lys 570 Ala 585

				605					610					615
Asp	Lys	Glu	His	Glu 620	Glu	Gly	Arg	Asp	Ser 625	Glu	Glu	Gly	Pro	Arg 630
Cys	Gly	Ser	Ser	Glu 635	Asp	Leu	His	Asp	Ser 640	Val	Arg	Glu	Gly	Pro 645
Asp	Leu	Asp	Arg	Pro 650	Gly	Ser	Asp	Arg	Gln 655	Glu	Arg	Glu	Arg	Ala 660
Arg	Gly	Asp	Ser	Glu 665	Ala	Leu	Asp	Glu	Glu 670	Ser				

<210> 309

<211> 3871

<212> DNA

<213> Homo sapiens

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Lys Leu Thr Tyr Lys Asp Leu Leu Leu Ser Asn Ser Cys Ile Pro
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Phe Leu Leu Ser Leu Val Asp Leu Asn Lys Asn Phe Lys Lys Ile 95 100 105

Tyr Trp Pro Ala Ala Lys Glu Arg Val Glu Leu Cys Lys Leu Ala 110 115 120

Gly Lys Asp Ala Asn Thr Glu Cys Ala Asn Phe Ile Arg Val Leu 125 130 135

Gln Pro Tyr Asn Lys Thr His Ile Tyr Val Cys Gly Thr Gly Ala 140 145 150

Phe His Pro Ile Cys Gly Tyr Ile Asp Leu Gly Val Tyr Lys Glu 155 160 165

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Gly	Asn	Ala	Cys	Ser 560	Arg	Tyr	Ala	Pro	Thr 565	Ser	Lys	Arg	Arg	Ala 570
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Asp	Glu	His	Arg	Glu 635	Glu	Leu	Lys	Pro	Asp 640	Glu	Arg	Ile	Ile	Lys 645
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Asn	Thr	Gln	Arg	Ala 695	Glu	His	Glu	Glu	Gly 700	Gln	Val	Lys	Asp	Leu 705
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His	Arg	Glu	Lys	Arg 740	Arg	Gln	Arg	Asn	Lys 745	Gly	Gly	Pro	Lys	Trp 750
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Pro Ser Ile Glu Gln Arg Leu Gln Glu Val Arg Glu Ser Ile Arg
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Leu Gln Gly Ala Gly Leu Asp Val Glu Arg Trp Leu Lys Pro Ala 80 85 90

Met Thr Gln Ala Gln Asp Glu Val Glu Gln Glu Arg Arg Leu Ser 95 100 105

Glu Ala Arg Leu Ser Gln Arg Asp Leu Ser Pro Thr Ala Glu Asp 110 115 120

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<213> Homo sapiens

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Leu Pro Ser Ala Arg Leu Ala Ser Pro Leu Pro Arg Glu Glu Glu 50 55 60

Ile Val Phe Pro Glu Lys Leu Asn Gly Ser Val Leu Pro Gly Ser 65 70 75

Gly Ala Pro Ala Arg Leu Leu Cys Arg Leu Gln Ala Phe Gly Glu 80 85 90

Thr Leu Leu Glu Leu Glu Gln Asp Ser Gly Val Gln Val Glu
95 100 105

Gly Leu Thr Val Gln Tyr Leu Gly Gln Ala Pro Glu Leu Leu Gly
110 115 120

Gly Ala Glu Pro Gly Thr Tyr Leu Thr Gly Thr Ile Asn Gly Asp 125 130 135

Pro Glu Ser Val Ala Ser Leu His Trp Asp Gly Gly Ala Leu Leu 140 145 150

Gly Val Leu Gln Tyr Arg Gly Ala Glu Leu His Leu Gln Pro Leu 155 160 165

Glu Gly Gly Thr Pro Asn Ser Ala Gly Gly Pro Gly Ala His Ile 170 175 180

Leu Arg Arg Lys Ser Pro Ala Ser Gly Gln Gly Pro Met Cys Asn

Val Lys Ala Pro Leu Gly Ser Pro Ser Pro Arg Pro Arg Arg Ala 200 205 210

Lys Arg Phe Ala Ser Leu Ser Arg Phe Val Glu Thr Leu Val Val 215 220 225

Ala Asp Asp Lys Met Ala Ala Phe His Gly Ala Gly Leu Lys Arg 230 235 240

Tyr Leu Leu Thr Val Met Ala Ala Ala Ala Lys Ala Phe Lys His

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Ala G	ln	Thr	Leu	Arg 290	Ser	Phe	Cys	Ala	Trp 295	Gln	Arg	Gly	Leu	Asn 300
Thr P	ro	Glu	Asp	Ser 305	Gly	Pro	Asp	His	Phe 310	Asp	Thr	Ala	Ile	Leu 315
Phe T	hr'	Arg	Gln	Asp 320	Leu	Cys	Gly	Val	Ser 325	Thr	Cys	Asp	Thr	Leu 330
Gly M	let	Ala	Asp	Val 335	Gly	Thr	Val	Cys	Asp 340	Pro	Ala	Arg	Ser	Cys 345
Ala I	le	Val	Glu	Asp 350	Asp	Gly	Leu	Gln	Ser 355	Ala	Phe	Thr	Ala	Ala 360
His G	lu	Leu	Gly	His 365	Val	Phe	Asn	Met	Leu 370	His	Asp	Asn	Ser	Lys 375
Pro C	ys	Ile	Ser	Leu 380	Asn	Gly	Pro	Leu	Ser 385	Thr	Ser	Arg	His	Val 390
Met A	la	Pro	Val	Met 395	Ala	His	Val	Asp	Pro 400	Glu	Glu	Pro	Trp	Ser 405
Pro C	:ys	Ser	Ala	Arg 410	Phe	Ile	Thr	Asp	Phe 415	Leu	Asp	Asn	Gly	Tyr 420
Gly H	lis	Суз	Leu	Leu 425	Asp	Lys	Pro	Glu	Ala 430	Pro	Leu	His	Leu	Pro 435
Val T	'hr	Phe	Pro	Gly 440	Lys	Asp	Tyr	Asp	Ala 445	Asp	Arg	Gln	Cys	Gln 450
Leu T	'hr	Phe	Gly	Pro 455	Asp	Ser	Arg	His	Cys 460	Pro	Gln	Leu	Pro	Pro 465
Pro C	ys	Ala	Ala	Leu 470	Trp	Cys	Ser	Gly	His 475	Leu	Asn	Gly	His	Ala 480
Met C	:ys	Gln	Thr	Lys 485	His	Ser	Pro	Trp	Ala 490	Asp	Gly	Thr	Pro	Cys 495
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Gln L	eu	Gln	Asp	Phe 515	Asn	Ile	Pro	Gln	Ala 520	Gly	Gly	Trp	Gly	Pro 525
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Tyr	Tyr	Val	Leu	Glu 635	Pro	Arg	Val	Val	Asp 640	Gly	Thr	Pro	Cys	Ser 645
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Gly	Cys	Asp	Arg	Ile 665	Ile	Gly	Ser	Lys	Lys 670	Lys	Phe	Asp	Lys	Cys 675
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Leu	Thr	Leu	Gln	Val 785	Leu	Val	Ala	Gly	Asn 790	Pro	Gln	Asp	Thr	Arg 795
Leu	Arg	Tyr	Ser	Phe 800	Phe	Val	Pro	Arg	Pro 805	Thr	Pro	Ser	Thr	Pro 810
Ara	Pro	Thr	Pro	Gln	Asn	Tro	I.e.i	His	Ara	Ara	Ala	Gln	Tle	Leu

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Glu Ile Leu Arg Arg Arg Pro Trp Ala Gly Arg Lys 830 835

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<400> 319

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<400> 320

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<211> 1197

<212> DNA

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Leu Phe Trp Gly Ser Lys His Phe Trp Pro Glu Val Pro Lys Lys
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Phe Ile L	ys Thr	Gln 125	Ile	Lys	Val	Ile	Pro 130	Glu	Phe	Ser	Glu	Pro 135
Glu Glu G	lu Ile	Asp 140	Glu	Asn	Glu	Glu	Ile 145	Thr	Thr	Thr	Phe	Phe 150
Glu Gln S	er Val	Ile 155	Trp	Val	Pro	Ala	Glu 160	Lys	Pro	Ile	Glu	Asn 165
Arg Asp P	he Leu	Lys 170	Asn	Ser	Lys	Ile	Leu 175	Glu	Ile	Cys	Asp	Asn 180
Val Thr M	et Tyr	Trp 185	Ile	Asn	Pro	Thr	Leu 190	Ile	Ser	Val	Ser	Glu 195
Leu Gln A	sp Phe	Glu 200	Glu	Glu	Gly	Glu	Asp 205	Leu	His	Phe	Pro	Ala 210
Asn Glu L	ys Lys	Gly 215	Ile	Glu	Gln	Asn	Glu 220	Gln	Trp	Val	Val	Pro 225
Gln Val L	ys Val	Glu 230	Lys	Thr	Arg	His	Ala 235	Arg	Gln	Ala	Ser	Glu 240
Glu Glu L	eu Pro	Ile 245	Asn	Asp	Tyr	Thr	Glu 250	Asn	Gly	Ile	Glu	Phe 255
Asp Pro M	et Leu	Asp 260	Glu	Arg	Gly	Tyr	Cys 265	Cys	Ile	Tyr	Cys	Arg 270
Arg Gly A	sn Arg	Tyr 275	Cys	Arg	Arg	Val	Cys 280	Glu	Pro	Leu	Leu	Gly 285
Tyr Tyr P	ro Tyr	Pro 290	Tyr	Cys	Tyr	Gln	Gly 295	Gly	Arg	Val	Ile	Cys 300
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<212> PRT

<213> Homo sapiens

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Tyr Leu	Lys	Gly	Leu 50	Trp	Met	Glu	Cys	Val 55	Trp	His	Ser	Thr	Gly 60
Ile Tyr	Gln	Cys	Gln 65	Ile	Tyr	Arg	Ser	Leu 70	Leu	Ala	Leu	Pro	Gln 75
Asp Leu	Gln	Ala	Ala 80	Arg	Ala	Leu	Met	Val 85	Ile	Ser	Суѕ	Leu	Leu 90
Ser Gly	Ile	Ala	Cys 95	Ala	Суѕ	Ala	Val	Ile 100	Gly	Met	Lys	Суз	Thr 105
Arg Cys	Ala	Lys	Gly 110	Thr	Pro	Ala	Lys	Thr 115	Thr	Phe	Ala	Ile	Leu 120
Gly Gly	Thr	Leu	Phe 125	Ile	Leu	Ala	Gly	Leu 130	Leu	Cys	Met	Val	Ala 135
Val Ser	Trp	Thr	Thr 140	Asn	Asp	Val	Val	Gln 145	Asn	Phe	Tyr	Asn	Pro 150
Leu Leu	Pro	Ser	Gly 155	Met	Lys	Phe	Glu	Ile 160	Gly	Gln	Ala	Leu	Tyr 165
Leu Gly	Phe	Ile	Ser 170	Ser	Ser	Leu	Ser	Leu 175	Ile	Gly	Gly	Thr	Leu 180
Leu Cys	Leu	Ser	Cys 185	Gln	Asp	Glu	Ala	Pro 190	Tyr	Arg	Pro	Tyr	Gln 195
Ala Pro	Pro	Arg	Ala 200	Thr	Thr	Thr	Thr	Ala 205	Asn	Thr	Ala	Pro	Ala 210
Tyr Gln	Pro	Pro	Ala 215	Ala	Tyr	Lys	Asp	Asn 220	Arg	Ala	Pro	Ser	Val 225
Thr Ser	Ala	Thr	His 230	Ser	Gly	Tyr	Arg	Leu 235	Asn	Asp	Tyr	Val	
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20 25 30

Ser Thr Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln
35 40 45

Tyr Glu Gly Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe
50 55 60

Thr Glu Cys Arg Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met
65 70 75

Leu Gln Ala Val Arg Ala Leu Met Ile Val Gly Ile Val Leu Gly
80 85 90

Ala Ile Gly Leu Leu Val Ser Ile Phe Ala Leu Lys Cys Ile Arg 95 100 105

Ile Gly Ser Met Glu Asp Ser Ala Lys Ala Asn Met Thr Leu Thr
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Ser Gly Ile Met Phe Ile Val Ser Gly Leu Cys Ala Ile Ala Gly

Val Ser Val Phe Ala Asn Met Leu Val Thr Asn Phe Trp Met Ser 140 145 150

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<213> Homo sapiens

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Ala	Gly	Gly	Leu	Thr 185	Leu	Ile	Gly	Gly	Val 190	Met	Met	Cys	Ile	Ala 195
Cys	Arg	Gly	Leu	Ala 200	Pro	Glu	Glu	Thr	Asn 205	Tyr	Lys	Ala	Val	Ser 210
Tyr	His	Ala	Ser	Gly 215	His	Ser	Val	Ala	Tyr 220	Lys	Pro	Gly	Gly	Phe 225
Lys	Ala	Ser	Thr	Gly 230	Phe	Gly	Ser	Asn	Thr 235	Lys	Asn	Lys	Lys	Ile 240
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<212> DNA

<213> Homo sapiens

260

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Arg	Val	Ser	Ala	Phe 35	Ile	Glu	Asn	Asn	Ile 40	Val	Val	Phe	Glu	Asn 45
Phe	Trp	Glu	Gly	Leu 50	Trp	Met	Asn	Cys	Val 55	Arg	Gln	Ala	Asn	Ile 60
Arg	Met	Gln	Суз	Lys 65	Ile	Tyr	Asp	Ser	Leu 70	Leu	Ala	Leu	Ser	Pro 75
Asp	Leu	Gln	Ala	Ala 80	Arg	Gly	Leu	Met	Cys 85	Ala	Ala	Ser	Val	Met 90
Ser	Phe	Leu	Ala	Phe 95	Met	Met	Ala	Ile	Leu 100	Gly	Met	Lys	Cys	Thr 105
Arg	Cys	Thr	Gly	Asp 110	Asn	Glu	Lys	Val	Lys 115	Ala	His	Ile	Leu	Leu 120
Thr	Ala	Gly	Ile	Ile 125	Phe	Ile	Ile	Thr	Gly 130	Met	Val	Val	Leu	Ile 135
Pro	Val	Ser	Trp	Val 140	Ala	Asn	Ala	Ile	Ile 145	Arg	Asp	Phe	Tyr	Asn 150
Ser	Ile	Val	Asn	Val 155	Ala	Gln	Lys	Arg	Glu 160	Leu	Gly	Glu	Ala	Leu 165
Tyr	Leu	Gly	Trp	Thr 170	Thr	Ala	Leu	Val	Leu 175	Ile	Val	Gly	Gly	Ala 180
Leu	Phe	Cys	Cys	Val 185	Phe	Cys	Cys	Asn	Glu 190	Lys	Ser	Ser	Ser	Tyr 195
Arg	Tyr	Ser	Ile	Pro 200	Ser	His	Arg	Thr	Thr 205	Gln	Lys	Ser	Tyr	His 210
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<213> Homo sapiens

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Lys	Val	Thr	Ala	Phe 35	Ile	Gly	Asn	Ser	Ile 40	Val	Val	Ala	Gln	Val 45
Val	Trp	Glu	Gly	Leu 50	Trp	Met	Ser	Cys	Val 55	Val	Gln	Ser	Thr	Gly 60
Gln	Met	Gln	Cys	Lys 65	Val	Tyr	Asp	Ser	Leu 70	Leu	Ala	Leu	Pro	Gln 75
Asp	Leu	Gln	Ala	Ala 80	Arg	Ala	Leu	Cys	Val 85	Ile	Ala	Leu	Leu	Val 90
Ala	Leu	Phe	Gly	Leu 95	Leu	Val	Tyr	Leu	Ala 100	Gly	Ala	Lys	Cys	Thr 105
Thr	Cys	Val	Glu	Glu 110	Lys	Asp	Ser	Lys	Ala 115	Arg	Leu	Val	Leu	Thr 120
Ser	Gly	Ile	Val	Phe 125	Val	Ile	Ser	Gly	Val 130	Leu	Thr	Leu	Ile	Pro 135
Val	Суѕ	Trp	Thr	Ala 140	His	Ala	Ile	Ile	Arg 145	Asp	Phe	Tyr	Asn	Pro 150
Leu	Val	Ala	Glu	Ala 155	Gln	Lys	Arg	Glu	Leu 160	Gly	Ala	Ser	Leu	Tyr 165
Leu	Gly	Trp	Ala	Ala 170	Ser	Gly	Leu	Leu	Leu 175	Leu	Gly	Gly	Gly	Leu 180
Leu	Cys	Cys	Thr	Cys 185	Pro	Ser	Gly	Gly	Ser 190	Gln	Gly	Pro	Ser	His 195
Tyr	Met	Ala	Arg	Tyr 200	Ser	Thr	Ser	Ala	Pro 205	Ala	Ile	Ser	Arg	Gly 210
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Ala Leu Met Cys Val Ala Val Ala Leu Ser Leu Ile Ala Leu Leu

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<211> 173

<212> PRT

<213> Homo sapiens

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Ile Leu Thr Gly Ile Phe Val Leu Ile Pro Val Ser Trp Thr Ala 80 85 90

Asn Ile Ile Ile Arg Asp Phe Tyr Asn Pro Ala Ile His Ile Gly
95 100 105

Gln Lys Arg Glu Leu Gly Ala Ala Leu Phe Leu Gly Trp Ala Ser 110 115 120

Ala Ala Val Leu Phe Ile Gly Gly Gly Leu Leu Cys Gly Phe Cys 125 130 135

Cys Cys Asn Arg Lys Lys Gln Gly Tyr Arg Tyr Pro Val Pro Gly
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Tyr Arg Val Pro His Thr Asp Lys Arg Arg Asn Thr Thr Met Leu 155 160 165

Ser Lys Thr Ser Thr Ser Tyr Val

<210> 333

<211> 535

<212> DNA

<213> Homo sapiens

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Asp Cys Ser Ile Tyr Lys Lys Tyr Pro Val Val Ala Ile Pro Cys
35 40 45

Pro Ile Thr Tyr Leu Pro Val Cys Gly Ser Asp Tyr Ile Thr Tyr 50 55 60

Gly Asn Glu Cys His Leu Cys Thr Glu Ser Leu Lys Ser Asn Gly
65 70 75

Arg Val Gln Phe Leu His Asp Gly Ser Cys 80 85

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tggccctgac cgggctggcg ctgctcctgc tcctgtgctg gggcccaggt 150
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<213> Homo sapiens

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20 25 30

Gly Asn Lys Leu Lys Leu Met Leu Gln Lys Arg Glu Ala Pro Val 35 40 45

Pro Thr Lys Thr Lys Val Ala Val Asp Glu Asn Lys Ala Lys Glu
50 55 60

Phe Leu Gly Ser Leu Lys Arg Gln Lys Arg Gln Leu Trp Asp Arg
65 70 75

Thr Arg Pro Glu Val Gln Gln Trp Tyr Gln Gln Phe Leu Tyr Met 80 85 90

Gly Phe Asp Glu Ala Lys Phe Glu Asp Asp Ile Thr Tyr Trp Leu 95 100 105

Asn Arg Asp Arg Asn Gly His Glu Tyr Tyr Gly Asp Tyr Tyr Gln
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ttetggtget ggeeettgee tgggteteaa egeacacege tgagggeggg 200
gaeecactge ceeageegte agggaeecea aegeeateee ageecagege 250
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<211> 246

<212> PRT

<213> Homo sapiens

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Thr His Thr Ala Glu Gly Gly Asp Pro Leu Pro Gln Pro Ser Gly
35 40 45

Thr Pro Thr Pro Ser Gln Pro Ser Ala Ala Met Ala Ala Thr Asp Ser Met Arg Gly Glu Ala Pro Gly Ala Glu Thr Pro Ser Leu Arg 65 70 His Arg Gly Gln Ala Ala Gln Pro Glu Pro Ser Thr Gly Phe Thr Ala Thr Pro Pro Ala Pro Asp Ser Pro Gln Glu Pro Leu Val Leu 100 95 Arg Leu Lys Phe Leu Asn Asp Ser Glu Gln Val Ala Arg Ala Trp 115 120 · 110 Pro His Asp Thr Ile Gly Ser Leu Lys Arg Thr Gln Phe Pro Gly 130 125 Arg Glu Gln Gln Val Arg Leu Ile Tyr Gln Gly Gln Leu Leu Gly 145 140 Asp Asp Thr Gln Thr Leu Gly Ser Leu His Leu Pro Pro Asn Cys 155 160 165 Val Leu His Cys His Val Ser Thr Arg Val Gly Pro Pro Asn Pro 170 175 Pro Cys Pro Pro Gly Ser Glu Pro Gly Pro Ser Gly Leu Glu Ile 185 190 Gly Ser Leu Leu Leu Pro Leu Leu Leu Leu Leu Leu Leu Leu Leu 200 205 Trp Tyr Cys Gln Ile Gln Tyr Arg Pro Phe Phe Pro Leu Thr Ala 220 Thr Leu Gly Leu Ala Gly Phe Thr Leu Leu Leu Ser Leu Leu Ala 240 230 Phe Ala Met Tyr Arg Pro 245 <210> 339

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<212> PRT

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Leu Gln Leu Glu Asp Leu Asp Gly Phe Glu Gly Tyr Ser Leu Ser
35 40 45

Asp Trp Leu Cys Leu Ala Phe Val Glu Ser Lys Phe Asn Ile Ser 50 55 60

Lys Ile Asn Glu Asn Ala Asp Gly Ser Phe Asp Tyr Gly Leu Phe
65 70 75

Gln Ile Asn Ser His Tyr Trp Cys Asn Asp Tyr Lys Ser Tyr Ser 80 85 90

Glu Asn Leu Cys His Val Asp Cys Gln Asp Leu Leu Asn Pro Asn 95 100 105

Leu Leu Ala Gly Ile His Cys Ala Lys Arg Ile Val Ser Gly Ala 110 115 120

Arg Gly Met Asn Asn Trp Val Glu Trp Arg Leu His Cys Ser Gly
125 130 135

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Ala	Met	Leu	His	Pro 35	Pro	His	His	Thr	Leu 40	His	Gln	Thr	Val	Thr 45
Ala	Gln	Ala	Ser	Lys 50	His	Ser	Pro	Glu	Ala 55	Arg	Tyr	Arg	Leu	Asp 60
Phe	Gly	Glu	Ser	Gln 65	Asp	Trp	Val	Leu	Glu 70	Ala	Glu	Asp	Glu	Gly 75
Glu	Glu	Tyr	Ser	Pro 80	Leu	Glu	Gly	Leu	Pro 85	Pro	Phe	Ile	Ser	Leu 90
Arg	Glu	Asp	Gln	Leu 95	Leu	Val	Ala	Val	Ala 100	Leu	Pro	Gln	Ala	Arg 105
Arg	Asn	Gln	Ser	Gln 110	Gly	Arg	Arg	Gly	Gly 115	Ser	Tyr	Arg	Leu	11e
Lys	Gln	Pro	Arg	Arg 125	Gln	Asp	Lys	Glu	Ala 130	Pro	Lys	Arg	Asp	Trp 135
Gly	Ala	Asp	Glu	Asp 140	Gly	Glu	Val	Ser	Glu 145	Glu	Glu	Glu	Leu	Thr 150
Pro	Phe	Ser	Leu	Asp 155	Pro	Arg	Gly	Leu	Gln 160	Glu	Ala	Leu	Ser	Ala 165
Arg	Ile	Pro	Leu	Gln 170	Arg	Ala	Leu	Pro	Glu 175	Val	Arg	His	Pro	Leu 180
Cys	Leu	Gln	Gln	His 185	Pro	Gln	Asp	Ser	Leu 190	Pro	Thr	Ala	Ser	Val 195
Ile	Leu	Cys	Phe	His 200	Asp	Gľu	Ala	Trp	Ser 205	Thr	Leu	Leu	Arg	Thr 210
Val	His	Ser	Ile	Leu 215	Asp	Thr	Val	Pro	Arg 220	Ala	Phe	Leu	Lys	Glu 225
Ile	Ile	Leu	Val	Asp 230	Asp	Leu	Ser	Gln	Gln 235	Gly	Gln	Leu	Lys	Ser 240
Ala	Leu	Ser	Glu	Tyr 245	Val	Ala	Arg	Leu	Glu 250	Gly	Val	Lys	Leu	Leu 255
Arg	Ser	Asn	Lys	Arg	Leu	Gly	Ala	Ile	Arg	Ala	Arg	Met	Leu	Gly

Ala	Thr	Arg	Ala	Thr 275	Gly	Asp	Val	Leu	Val 280	Phe	Met	Asp	Ala	His 285
Cys	Glu	Cys	His	Pro 290	Gly	Trp	Leu	Glu	Pro 295	Leu	Leu	Ser	Arg	Ile 300
Ala	Gly	Asp	Arg	Ser 305	Arg	Val	Val	Ser	Pro 310	Val	Ile	Asp	Val	Ile 315
Asp	Trp	Lys	Thr	Phe 320	Gln	Tyr	Tyr	Pro	Ser 325	Lys	Asp	Leu	Gln	Arg 330
Gly	Val	Leu	Asp	Trp 335	Lys	Leu	Asp	Phe	His 340	Trp	Glu	Pro	Leu	Pro 345
Glu	His	Val	Arg	Lys 350	Ala	Leu	Gln	Ser	Pro 355,		Ser	Pro	Ile	Arg 360
Ser	Pro	Val	Val	Pro 365	Gly	Glu	Val	Val	Ala 370	Met	Asp	Arg	His	Tyr 375
Phe	Gln	Asn	Thr	Gly 380	Ala	Tyr	Asp	Ser	Leu 385	Met	Ser	Leu	Arg	Gly 390
Gly	Glu	Asn	Leu	Glu 395	Leu	Ser	Phe	Lys	Ala 400	Trp	Leu	Cys	Gly	Gly 405
Ser	Val	Glu	Ile	Leu 410	Pro	Cys	Ser	Arg	Val 415	Gly	His	Ile	Tyr	Gln 420
Asn	Gln	Asp	Ser	His 425	Ser	Pro	Leu	Asp	Gln 430	Glu	Ala	Thr	Leu	Arg 435
Asn	Arg	Val	Arg	Ile 440	Ala	Glu	Thr	Trp	Leu 445	Gly	Ser	Phe	Lys	Glu 450
Thr	Phe	Tyr	Lys	His 455	Ser	Pro	Glu	Ala	Phe 460	Ser	Leu	Ser	Lys	Ala 465
Glu	Lys	Pro	Asp	Cys 470	Met	Glu	Arg	Leu	Gln 475	Leu	Gln	Arg	Arg	Leu 480
Gly	Суз	Arg	Thr	Phe 485	His	Trp	Phe	Leu	Ala 490	Asn	Val	Tyr	Pro	Glu 495
Leu	Tyr	Pro	Ser	Glu 500	Pro	Arg	Pro	Ser	Phe 505	Ser	Gly	Lys	Leu	His 510
Asn	Thr	Gly	Leu	Gly 515	Leu	Cys	Ala	Asp	Cys 520	Gln	Ala	Glu	Gly	Asp 525
Ile	Leu	Gly	Cys	Pro 530	Met	Val	Leu	Ala	Pro 535	Cys	Ser	Asp	Ser	Arg 540
Gln	Gln	Gln	Tyr	Leu 545	Gln	His	Thr	Ser	Arg 550	Lys	Glu	Ile	His	Phe 555

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Gly Ser Pro Gln His Leu Cys Phe Ala Val Arg Gln Glu Gln Val
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 Ile Leu Gln Asn Cys Thr Glu Glu Gly Leu Ala Ile His Gln Gln
                                      580
 His Trp Asp Phe Gln Glu Asn Gly Met Ile Val His Ile Leu Ser
 Gly Lys Cys Met Glu Ala Val Val Gln Glu Asn Asn Lys Asp Leu
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<213> Homo sapiens
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<213> Homo sapiens

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Glu	Val	Val	Asp	Leu 50	Tyr	Asn	Gly	Met	Cys 55	Leu	Gln	Gly	Pro	Ala 60
Gly	Val	Pro	Gly	Arg 65	Asp	Gly	Ser	Pro	Gly 70	Ala	Asn	Val	Ile	Pro 75
Gly	Thr	Pro	Gly	Ile 80	Pro	Gly	Arg	Asp	Gly 85	Phe	Lys	Gly	Glu	Lys 90
Gly	Glu	Cys	Leu	Arg 95	Glu	Ser	Phe	Glu	Glu 100	Ser	Trp	Thr	Pro	Asn 105
Tyr	Lys	Gln	Cys	Ser 110	Trp	Ser	Ser	Leu	Asn 115	Tyr	Gly	Ile	Asp	Leu 120
Gly	Lys	Ile	Ala	Glu 125	Cys	Thr	Phe	Thr	Lys 130	Met	Arg	Ser	Asn	Ser 135
Ala	Leu	Arg	Val	Leu 140	Phe	Ser	Gly	Ser	Leu 145	Arg	Leu	Lys	Cys	Arg 150
Asn	Ala	Cys	Cys	Gln 155	Arg	Trp	Tyr	Phe	Thr 160	Phe	Asn	Gly	Ala	Glu 165
Cys	Ser	Gly	Pro	Leu 170	Pro	Ile	Glu	Ala	Ile 175	Ile	Tyr	Leu	Asp	Gln 180
Gly	Ser	Pro	Glu	Met 185	Asn	Ser	Thr	Ile	Asn 190	Ile	His	Arg	Thr	Ser 195
Ser	Val	Glu	Gly	Leu 200	Cys	Glu	Gly	Ile	Gly 205	Ala	Gly	Leu	Val	Asp 210
Val	Ala	Ile	Trp	Val 215	Gly	Thr	Cys	Ser	Asp 220	Tyr	Pro	Lys	Gly	Asp 225
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Leu	Pro	Lys		•										

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<211> 121

<212> PRT

<213> Homo sapiens

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Pro Val Pro Thr Leu Trp Asn Glu Pro Ala Glu Leu Pro Ser Gly
35 40 45

Glu Gly Pro Val Glu Ser Thr Ser Pro Gly Arg Glu Pro Val Asp
50 55 60

Thr Gly Pro Pro Ala Pro Thr Val Ala Pro Gly Pro Glu Asp Ser
65 70 75

Thr Ala Gln Glu Arg Leu Asp Gln Gly Gly Gly Ser Leu Gly Pro 80 85 90

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Val Val Leu Ala Leu Val Val Val Ala Leu Arg Lys Phe Ser Ala 110 115 120

Ser

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<211> 2134

<212> DNA

<213> Homo sapiens

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<210> 356

<211> 157

<212> PRT

<213> Homo sapiens

<400> 356

Met Ala Leu Leu Cys Leu Val Cys Leu Thr Ala Ala Leu Ala 1 5 10 15

His Gly Cys Leu His Cys His Ser Asn Phe Ser Lys Lys Phe Ser 20 25 30

Phe Tyr Arg His His Val Asn Phe Lys Ser Trp Trp Val Gly Asp 35 40 45

Ile Pro Val Ser Gly Ala Leu Leu Thr Asp Trp Ser Asp Asp Thr 50 55 60

Met Lys Glu Leu His Leu Ala Ile Pro Ala Lys Ile Thr Arg Glu 65 70 75

Lys Leu Asp Gln Val Ala Thr Ala Val Tyr Gln Met Met Asp Gln 80 85 90

Leu Tyr Gln Gly Lys Met Tyr Phe Pro Gly Tyr Phe Pro Asn Glu 95 100 105

Leu Arg Asn Ile Phe Arg Glu Gln Val His Leu Ile Gln Asn Ala 110 115 120

Ile Ile Glu Arg His Leu Ala Pro Gly Ser Trp Gly Gly Gln

125 130 135

Leu Ser Arg Glu Gly Pro Ser Leu Ala Pro Glu Gly Ser Met Pro 140 145 150

Ser Pro Arg Gly Asp Leu Pro 155

<210> 357

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 357

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cagaagttaa aggctgtctc caagtccctg aactcagcag aaatagacca 1450
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caacctgcat aataaataaa aggcaatcat gttata 1536

<210> 358

<211> 273

<212> PRT

<213> Homo sapiens

<400> 358

Met Glu Ala Ala Pro Ser Arg Phe Met Phe Leu Leu Phe Leu Leu 1 5 10 15

Thr Cys Glu Leu Ala Ala Glu Val Ala Ala Glu Val Glu Lys Ser 20 25 30

Ser Asp Gly Pro Gly Ala Ala Gln Glu Pro Thr Trp Leu Thr Asp 35 40 45

Val Pro Ala Ala Met Glu Phe Ile Ala Ala Thr Glu Val Ala Val
50 55 60

Ile Gly Phe Phe Gln Asp Leu Glu Ile Pro Ala Val Pro Ile Leu 65 70 75

His Ser Met Val Gln Lys Phe Pro Gly Val Ser Phe Gly Ile Ser 80 85 90

Thr Asp Ser Glu Val Leu Thr His Tyr Asn Ile Thr Gly Asn Thr 95 100 105

Ile Cys Leu Phe Arg Leu Val Asp Asn Glu Gln Leu Asn Leu Glu
110 115 120

Asp Glu Asp Ile Glu Ser Ile Asp Ala Thr Lys Leu Ser Arg Phe 125 130 135

Ile Glu Ile Asn Ser Leu His Met Val Thr Glu Tyr Asn Pro Val

Thr Val Ile Gly Leu Phe Asn Ser Val Ile Gln Ile His Leu Leu 155 160 165

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Leu Ile Met Asn Lys Ala Ser Pro Glu Tyr Glu Glu Asn Met His
                 170
                                      175
 Arg Tyr Gln Lys Ala Ala Lys Leu Phe Gln Gly Lys Ile Leu Phe
 Ile Leu Val Asp Ser Gly Met Lys Glu Asn Gly Lys Val Ile Ser
                 200
 Phe Phe Lys Leu Lys Glu Ser Gln Leu Pro Ala Leu Ala Ile Tyr
                                      220
                 215
 Gln Thr Leu Asp Asp Glu Trp Asp Thr Leu Pro Thr Ala Glu Val
 Ser Val Glu His Val Gln Asn Phe Cys Asp Gly Phe Leu Ser Gly
                                                          255
                 245
 Lys Leu Leu Lys Glu Asn Arg Glu Ser Glu Gly Lys Thr Pro Lys
                 260
                                      265
 Val Glu Leu
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<223> Synthetic oligonucleotide probe
<400> 359
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<211> 20
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 360
 tgacgagtgg gatacactgc 20
<210> 361
<211> 24
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 361
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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<211> 1777
<212> DNA
<213> Homo sapiens
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 cctcageggg gaccegggct cagggaegeg geggeggegg eggegaetge 150
 agtggctgga cgatggcagc gtccgccgga gccggggcgg tgattgcagc 200
 cccagacage eggegetgge tgtggteggt getggeggeg gegettggge 250
 tcttgacagc tggagtatca gccttggaag tatatacgcc aaaagaaatc 300
 ttcgtggcaa atggtacaca agggaagctg acctgcaagt tcaagtctac 350
 tagtacgact ggcgggttga cctcagtctc ctggagcttc cagccagagg 400
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 tgacaagaaa gatgcatcaa tcaacataga aaatatgcag tttatacaca 550
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<210> 364

<211> 269

<212> PRT

<213> Homo sapiens

<400> 364

Met Ala Ala Ser Ala Gly Ala Gly Ala Val Ile Ala Ala Pro Asp 1 5 10 15

Ser Arg Arg Trp Leu Trp Ser Val Leu Ala Ala Leu Gly Leu
20 25 30

Leu Thr Ala Gly Val Ser Ala Leu Glu Val Tyr Thr Pro Lys Glu
35 40 45

Ile Phe Val Ala Asn Gly Thr Gln Gly Lys Leu Thr Cys Lys Phe
50 55 60

Lys Ser Thr Ser Thr Thr Gly Gly Leu Thr Ser Val Ser Trp Ser 65 70 75

Phe Gln Pro Glu Gly Ala Asp Thr Thr Val Ser Phe Phe His Tyr 80 85 90

Ser	Gln	Gly	Gln	Val 95	Tyr	Leu	Gly	Asn	Tyr 100	Pro	Pro	Phe	Lys	Asp 105
Arg	Ile	Ser	Trp	Ala 110	Gly	Asp	Leu	Asp	Lys 115	Lys	Asp	Ala	Ser	Ile 120
Asn	Ile	Glu	Asn	Met 125	Gln	Phe	Ile	His	Asn 130	Gly	Thr	Tyr	Ile	Cys 135
Asp	Val	Lys	Asn	Pro 140	Pro	Asp	Ile	Val	Val 145	Gln	Pro	Gly	His	Ile 150
Arg	Leu	Tyr	Val	Val 155	Glu	Lys	Glu	Asn	Leu 160	Pro	Val	Phe	Pro	Val 165
Trp	Val	Val	Val	Gly 170	Ile	Val	Thr	Ala	Val 175	Val	Leu	Gly	Leu	Thr 180
Leu	Leu	Ile	Ser	Met 185	Ile	Leu	Ala	Val	Leu 190	Tyr	Arg	Arg	Lys	Asn 195
Ser	Lys	Arg	Asp	Tyr 200	Thr	Gly	Cys	Ser	Thr 205	Ser	Glu	Ser	Leu	Ser 210
Pro	Val	Lys	Gln	Ala 215	Pro	Arg	Lys	Ser	Pro 220	Ser	Asp	Thr	Glu	Gly 225
Leu	Val	Lys	Ser	Leu 230	Pro	Ser	Gly	Ser	His 235	Gln	Gly	Pro	Val	Ile 240
Tyr	Ala	Gln	Leu	Asp 245	His	Ser	Gly	Gly	His 250	His	Ser	Asp	Lys	Ile 255
Asn	Lys	Ser	Glu	Ser 260	Val	Val	Tyr	Ala	Asp 265	Ile	Arg	Lys	Asn	

<210> 365

<211> 1321

<212> DNA

<213> Homo sapiens

<400> 365

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agtggttgga gtttctgtag atggaaaaga agtctggtca gaaggtttag 450 qttatqctqa tqttqaqaac cqtqtaccat gtaaaccaga gacagttatg 500 cgaattgcta gcatcagcaa aagtctcacc atggttgctc ttgccaaatt 550 qtqqqaaqca qqqaaactqq atcttqatat tccaqtacaa cattatgttc 600 ccqaattccc aqaaaaagaa tatgaaggtg aaaaggtttc tgtcacaaca 650 agattactga tttcccattt aagtggaatt cgtcattatg aaaaggacat 700 aaaaaaqqtq aaaqaaqaqa aagcttataa agccttgaag atgatgaaag 750 agaatgttgc atttgagcaa gaaaaagaag gcaaaagtaa tgaaaagaat 800 gattttacta aatttaaaac agagcaggag aatgaagcca aatgccggaa 850 ttcaaaacct ggcaagaaaa agaatgattt tgaacaaggc gaattatatt 900 tgagagaaaa gtttgaaaat tcaattgaat ccctaagatt atttaaaaat 950 qatcctttqt tcttcaaacc tqqtaqtcag tttttgtatt caacttttgg 1000 ctatacceta etggeageca tagtagagag agetteagga tgtaaatatt 1050 tggactatat gcagaaaata ttccatgact tggatatgct gacgactgtg 1100 caggaagaaa acgagccagt gatttacaat agagcaaggt aaatgaatac 1150 cttctgctgt gtctagctat atcgcatctt aacactattt tattaattaa 1200 aagtcaaatt ttctttgttt ccattccaaa atcaacctgc cacattttgg 1250 qaqcttttct acatqtctqt tttctcatct qtaaaqtqaa ggaagtaaaa 1300 catgtttata aagtaaaaaa a 1321

<210> 366

<211> 373

<212> PRT

<213> Homo sapiens

<400> 366

Met Tyr Arg Leu Leu Ser Ala Val Thr Ala Arg Ala Ala Pro 1 5 10 15

Gly Gly Leu Ala Ser Ser Cys Gly Arg Arg Gly Val His Gln Arg
20 25 30

Ala Gly Leu Pro Pro Leu Gly His Gly Trp Val Gly Gly Leu Gly
35 40 45

Leu Gly Leu Gly Leu Ala Leu Gly Val Lys Leu Ala Gly Gly Leu
50 55 60

Arg	Gly	Ala	Ala	Pro 65	Ala	Gln	Ser	Pro	Ala 70	Ala	Pro	Asp	Pro	Glu 75
Ala	Ser	Pro	Leu	Ala 80	Glu	Pro	Pro	Gln	Glu 85	Gln	Ser	Leu	Ala	Pro 90
Trp	Ser	Pro	Gln	Thr 95	Pro	Ala	Pro	Pro	Cys 100	Ser	Arg	Cys	Phe	Ala 105
Arg	Ala	Ile	Glu	Ser 110	Ser	Arg	Asp	Leu	Leu 115	His	Arg	Ile	Lys	Asp 120
Glu	Val	Gly	Ala	Pro 125	Gly	Ile	Val	Val	Gly 130	Val	Ser	Val	Asp	Gly 135
Lys	Glu	Val	Trp	Ser 140	Glu	Gly	Leu	Gly	Tyr 145	Ala	Asp	Val	Glu	Asn 150
Arg	Val	Pro	Cys	Lys 155	Pro	Glu	Thr	Val	Met 160	Arg	Ile	Ala	Ser	Ile 165
Ser	Lys	Ser	Leu	Thr 170	Met	Val	Ala	Leu	Ala 175	Lys	Leu	Trp	Glu	Ala 180
Gly	Lys	Leu	Asp	Leu 185	Asp	Ile	Pro	Val	Gln 190	His	Tyr	Val	Pro	Glu 195
Phe	Pro	Glu	Lys	Glu 200	Tyr	Glu	Gly	Glu	Lys 205	Val	Ser	Val	Thr	Thr 210
Arg	Leu	Leu	Ile	Ser 215	His	Leu	Ser	Gly	Ile 220	Arg	His	Tyr	Glu	Lys 225
Asp	Ile	Lys	Lys	Val 230	Lys	Glu	Glu	Lys	Ala 235	Tyr	Lys	Ala	Leu	Lys 240
Met	Met	Lys	Glu	Asn 245	Val	Ala	Phe	Glu	Gln 250	Glu	Lys	Glu	Gly	Lys 255
Ser	Asn	Glu	Lys	Asn 260	Asp	Phe	Thr	Lys	Phe 265	Lys	Thr	Glu	Gln	Glu 270
Asn	Glu	Ala	Lys	Cys 275	Arg	Asn	Ser	Lys	Pro 280	Gly	Lys	Lys	Lys	Asn 285
Asp	Phe	Glu	Gln	Gly 290	Glu	Leu	Tyr	Leu	Arg 295	Glu	Lys	Phe	Glu	Asn 300
Ser	Ile	Glu	Ser	Leu 305	Arg	Leu	Phe	Lys	Asn 310	Asp	Pro	Leu	Phe	Phe 315
Lys	Pro	Gly	Ser	Gln 320	Phe	Leu	Tyr	Ser	Thr 325	Phe	Gly	Tyr	Thr	Leu 330
Leu	Ala	Ala	Ile	Val 335	Glu	Arg	Ala	Ser	Gly 340	Cys	Lys	Tyr	Leu	Asp 345

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<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 367
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<210> 368
<211> 25
<212> DNA
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<220>
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catttggctt cattctcctg ctctg 25
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<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 369
aaaacctcag aacaactcat tttgcacc 28
<210> 370
<211> 41
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 370
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<210> 371
<211> 1150
<212> DNA
<213> Homo sapiens
<400> 371
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tggggcggaa ggtcgagagg gcgaggcctg tggcacggtg gggctgctgc 250
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20 25 30

<210> 372

<211> 269

<212> PRT

<213> Homo sapiens

<400> 372

Met Ala Ala Ala Ser Ala Gly Ala Thr Arg Leu Leu Leu Leu 1 5 10 15

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Gly	Glu	Ala	Суз	Gly 50	Thr	Val	Gly	Leu	Leu 55	Leu	Glu	His	Ser	Phe 60
Glu	Ile	Asp	Asp	Ser 65	Ala	Asn	Phe	Arg	Lys 70	Arg	Gly	Ser	Leu	Leu 75
Trp	Asn	Gln	Gln	Asp 80	Gly	Thr	Leu	Ser	Leu 85	Ser	Gln	Arg	Gln	Leu 90
Ser	Glu	Glu	Glu	Arg 95	Gly	Arg	Leu	Arg	Asp 100	Val	Ala	Ala	Leu	Asn 105
Gly	Leu	Tyr	Arg	Val 110	Arg	Ile	Pro	Arg	Arg 115	Pro	Gly	Ala	Leu	Asp 120
Gly	Leu	Glu	Ala	Gly 125	Gly	Tyr	Val	Ser	Ser 130	Phe	Val	Pro	Ala	Cys 135
Ser	Leu	Val	Glu	Ser 140	His	Leu	Ser	Asp	Gln 145	Leu	Thr	Leu	His	Val 150
Asp	Val	Ala	Gly	Asn 155	Val	Val	Gly	Val	Ser 160	Val	Val	Thr	His	Pro 165
Gly	Gly	Cys	Arg	Gly 170	His	Glu	Val	Glu	Asp 175	Val	Asp	Leu	Glu	Leu 180
Phe	Asn	Thr	Ser	Val 185	Gln	Leu	Gln	Pro	Pro 190	Thr	Thr	Ala	Pro	Gly 195
Pro	Glu	Thr	Ala	Ala 200	Phe	Ile	Glu	Arg	Leu 205	Glu	Met	Glu	Gln	Ala 210
Gln	Lys	Ala	Lys	Asn 215	Pro	Gln	Glu		Lys 220	Ser	Phe	Phe	Ala	Lys 225
Tyr	Trp	Met	Tyr	Ile 230	Ile	Pro	Val	Val	Leu 235	Phe	Leu	Met	Met	Ser 240
Gly	Ala	Pro	Asp	Thr 245	Gly	Gly	Gln	Gly	Gly 250	Gly	Gly	Gly	Gly	Gly 255
Gly	Gly	Gly	Gly	Ser 260	Gly	Leu	Cys	Cys	Val 265	Pro	Pro	Ser	Leu	
<210><211><211><212>	> 170 > DNA	96 1	nier	ne.										

ggagcgctgc tggaacccga gccggagccg gagccacagc ggggagggtg 50

gcctggcggc ctggagccgg acgtgtccgg ggcgtccccg cagaccgggg 100

<213> Homo sapiens

<400> 373

cagcaggtcg tccgggggcc caccatgctg gtgactgcct accttgcttt 150 tgtaggcctc ctggcctcct gcctggggct ggaactgtca agatgccggg 200 ctaaaccccc tggaagggcc tgcagcaatc cctccttcct tcggtttcaa 250 ctggacttct atcaggtcta cttcctggcc ctggcagctg attggcttca 300 ggccccctac ctctataaac tctaccagca ttactacttc ctggaaggtc 350 aaattgccat cctctatgtc tgtggccttg cctctacagt cctctttggc 400 ctagtggcct cctcccttgt ggattggctg ggtcgcaaga attcttgtgt 450 cctcttctcc ctgacttact cactatgctg cttaaccaaa ctctctcaag 500 actactttgt gctgctagtg gggcgagcac ttggtgggct gtccacagcc 550 ctgctcttct cagccttcga ggcctggtat atccatgagc acgtggaacg 600 gcatgacttc cctgctgagt ggatcccagc tacctttgct cgagctgcct 650 tctggaacca tgtgctggct gtagtggcag gtgtggcagc tgaggctgta 700 gccagctgga tagggctggg gcctgtagcg ccctttgtgg ctgccatccc 750 teteetgget etggeagggg cettggeeet tegaaactgg ggggagaact 800 atgaccggca gcgtgccttc tcaaggacct gtgctggagg cctgcgctgc 850 ctcctgtcgg accgccgcgt gctgctgctg ggcaccatac aagctctatt 900 tgagagtgtc atcttcatct ttgtcttcct ctggacacct gtgctggacc 950 cacacggggc ccctctgggc attatcttct ccagcttcat ggcagccagc 1000 ctgcttggct cttccctgta ccgtatcgcc acctccaaga ggtaccacct 1050 tcagcccatg cacctgctgt cccttgctgt gctcatcgtc gtcttctctc 1100 tcttcatgtt gactttctct accagcccag gccaggagag tccggtggag 1150 tccttcatag cctttctact tattgagttg gcttgtggat tatactttcc 1200 cagcatgage ttectaegga gaaaggtgat eeetgagaca gageaggetg 1250 gtgtactcaa ctggttccgg gtacctctgc actcactggc ttgcctaggg 1300 ctccttgtcc tccatgacag tgatcgaaaa acaggcactc ggaatatgtt 1350 cagcatttgc tctgctgtca tggtgatggc tctgctggca gtggtgggac 1400 tetteaccgt ggtaaggeat gatgetgage tgegggtace tteacctact 1450 gaggageeet atgeeeetga getgtaacee caeteeagga caagataget 1500 gggacagact cttgaattcc agctatccgg gattgtacag atctctctgt 1550 gactgacttt gtgactgtcc tgtggtttct cctgccattg ctttgtgttt 1600 gggaggacat gatgggggtg atggactgga aagaaggtgc caaaagttcc 1650 ctctqtqtta ctcccattta qaaaataaac acttttaaat gatcaaaaaa 1700 aaaaaa 1706

<210> 374

<211> 450 <212> PRT

<213> Homo sapiens

<400> 374

Met Leu Val Thr Ala Tyr Leu Ala Phe Val Gly Leu Leu Ala Ser

Cys Leu Gly Leu Glu Leu Ser Arg Cys Arg Ala Lys Pro Pro Gly

Arg Ala Cys Ser Asn Pro Ser Phe Leu Arg Phe Gln Leu Asp Phe

Tyr Gln Val Tyr Phe Leu Ala Leu Ala Ala Asp Trp Leu Gln Ala

Pro Tyr Leu Tyr Lys Leu Tyr Gln His Tyr Tyr Phe Leu Glu Gly

Gln Ile Ala Ile Leu Tyr Val Cys Gly Leu Ala Ser Thr Val Leu 80

Phe Gly Leu Val Ala Ser Ser Leu Val Asp Trp Leu Gly Arg Lys

Asn Ser Cys Val Leu Phe Ser Leu Thr Tyr Ser Leu Cys Cys Leu

Thr Lys Leu Ser Gln Asp Tyr Phe Val Leu Leu Val Gly Arg Ala 125

Leu Gly Gly Leu Ser Thr Ala Leu Leu Phe Ser Ala Phe Glu Ala 140

Trp Tyr Ile His Glu His Val Glu Arg His Asp Phe Pro Ala Glu

Trp Ile Pro Ala Thr Phe Ala Arg Ala Ala Phe Trp Asn His Val 180 170

Leu Ala Val Val Ala Gly Val Ala Ala Glu Ala Val Ala Ser Trp 190

Ile Gly Leu Gly Pro Val Ala Pro Phe Val Ala Ala Ile Pro Leu 205 210

Leu	Ala	Leu	Ala	Gly 215	Ala	Leu	Ala	Leu	Arg 220	Asn	Trp	Gly	Glu	Asn 225
Tyr	Asp	Arg	Gln	Arg 230	Ala	Phe	Ser	Arg	Thr 235	Cys	Ala	Gly	Gly	Leu 240
Arg	Cys	Leu	Leu	Ser 245	Asp	Arg	Arg	Val	Leu 250	Leu	Leu	Gly	Thr	Ile 255
Gln	Ala	Leu	Phe	Glu 260	Ser	Val	Ile	Phe	Ile 265	Phe	Val	Phe	Leu	Trp 270
Thr	Pro	Val	Leu	Asp 275	Pro	His	Gly	Ala	Pro 280	Leu	Gly	Ile	Ile	Phe 285
Ser	Ser	Phe	Met	Ala 290	Ala	Ser	Leu	Leu	Gly 295	Ser	Ser	Leu	Tyr	Arg 300
Ile	Ala	Thr	Ser	Lys 305	Arg	Tyr	His	Leu	Gln 310	Pro	Met	His	Leu	Leu 315
Ser	Leu	Ala	Val	Leu 320	Ile	Val	Val	Phe	Ser 325	Leu	Phe	Met	Leu	Thr 330
Phe	Ser	Thr	Ser	Pro 335	Gly	Gln	Glu	Ser	Pro 340	Val	Glu	Ser	Phe	Ile 345
Ala	Phe	Leu	Leu	Ile 350	Glu	Leu	Ala	Cys	Gly 355	Leu	Tyr	Phe	Pro	Ser 360
Met	Ser	Phe	Leu	Arg 365	Arg	Lys	Val	Ile	Pro 370	Glu	Thr	Glu	Gln	Ala 375
Gly	Val	Leu	Asn	Trp 380	Phe	Arg	Val	Pro	Leu 385	His	Ser	Leu	Ala	Cys 390
Leu	Gly	Leu	Leu	Val 395	Leu	His	Asp	Sèr	Asp 400	Arg	Lys	Thr	Gly	Thr 405
Arg	Asn	Met	Phe	Ser 410	Ile	Cys	Ser	Ala	Val 415	Met	Val	Met	Ala	Leu 420
Leu	Ala	Val	Val	Gly 425	Leu	Phe	Thr	Val	Val 430	Arg	His	Asp	Ala	Glu 435
Leu	Arg	Val	Pro	Ser 440	Pro	Thr	Glu	Glu	Pro 445	Tyr	Ala	Pro	Glu	Leu 450

<210> 375

<211> 1098

<212> DNA

<213> Homo sapiens

<400> 375

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gccctggaga tggtccccgg cgccgcgggc tggtgttgtc tcgtgctctg 100 gctccccgcg tgcgtcgcgg cccacggctt ccgtatccat gattatttgt 150 actttcaagt gctgagtcct ggggacattc gatacatctt cacagccaca 200 cctgccaagg actttggtgg tatctttcac acaaggtatg agcagattca 250 ccttqtcccc qctqaacctc cagaggcctg cggggaactc agcaacggtt 300 tetteateea qqaecaqatt qetetqqtqq aqaqqqqqqq etgeteette 350 ctctccaaqa ctcqqqtqqt ccaqqaqcac ggcgggcggg cggtgatcat 400 ctctgacaac gcagttgaca atgacagctt ctacgtggag atgatccagg 450 acaqtaccca qcqcacaqct gacatccccq ccctcttcct gctcggccga 500 gacggctaca tgatccgccg ctctctggaa cagcatgggc tgccatgggc 550 catcatttcc atcccagtca atgtcaccag catccccacc tttgagctgc 600 tgcaaccgcc ctggaccttc tggtagaaga gtttgtccca cattccagcc 650 ataaqtqact ctgaqctggg aaggggaaac ccaggaattt tgctacttgg 700 aatttqqaqa taqcatctqq qqacaaqtqq aqccaggtag aggaaaaggg 750 cccagggccc ccaagggtgt ctcatgctac aagaagaggc aagagacagg 850 ccccagggct tctggctaga acccgaaaca aaaggagctg aaggcaggtg 900 gcctgagagc catctgtgac ctgtcacact cacctggctc cagcctcccc 950 tacccagggt ctctqcacag tqaccttcac agcagttgtt ggagtggttt 1000 aaagagctgg tgtttgggga ctcaataaac cctcactgac tttttagcaa 1050 taaagcttct catcagggtt gcaaaaaaaa aaaaaaaaa aaaaaaaa 1098

<210> 376

<211> 188

<212> PRT

<213> Homo sapiens

<400> 376

Met Val Pro Gly Ala Ala Gly Trp Cys Cys Leu Val Leu Trp Leu 1 5 10 15

Pro Ala Cys Val Ala Ala His Gly Phe Arg Ile His Asp Tyr Leu 20 25 30

Tyr Phe Gln Val Leu Ser Pro Gly Asp Ile Arg Tyr Ile Phe Thr 35 40 45

```
Ala Thr Pro Ala Lys Asp Phe Gly Gly Ile Phe His Thr Arg Tyr
50 , 55 60
```

Glu Gln Ile His Leu Val Pro Ala Glu Pro Pro Glu Ala Cys Gly
65 70 75

Glu Leu Ser Asn Gly Phe Phe Ile Gln Asp Gln Ile Ala Leu Val $80 \\ 85 \\ 90$

Glu Arg Gly Gly Cys Ser Phe Leu Ser Lys Thr Arg Val Val Gln 95 100 105

Glu His Gly Gly Arg Ala Val Ile Ile Ser Asp Asn Ala Val Asp 110 115 120

Asn Asp Ser Phe Tyr Val Glu Met Ile Gln Asp Ser Thr Gln Arg 125 130 135

Thr Ala Asp Ile Pro Ala Leu Phe Leu Leu Gly Arg Asp Gly Tyr
140 145 150

Met Ile Arg Arg Ser Leu Glu Gln His Gly Leu Pro Trp Ala Ile 155 160 165

Ile Ser Ile Pro Val Asn Val Thr Ser Ile Pro Thr Phe Glu Leu 170 175 180

Leu Gln Pro Pro Trp Thr Phe Trp
185

<210> 377

<211> 496

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 396

<223> unknown base

<400> 377

tetgeeteea etgetetgt etgggateat ggaacttgea etgetgtgt 50 ggetggtggt gatggetggt gtgatteeaa teeagggegg gateetgaac 100 etgaacaaga tggteaagea agtgactggg aaaatgeeea teeteetaa 150 etggeeetae ggetgteaet geggaetagg tggeagagge eaaceeaaag 200 atgeeaegga etggtgetge eagaeeeatg actgetgeta tgaeeaeetg 250 aagaeeeagg ggtgeggeat etacaaggae aacaacaaaa geageataea 300 ttgtatggat ttateteaae getattgtt aatggetgtg tttaatgtga 350 teetatetgga aaatgaggae teegaataaa aagetattae tawttnaaaa 400

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<210> 378
<211> 116
<212> PRT
<213> Homo sapiens
<400> 378
 Met Glu Leu Ala Leu Leu Cys Gly Leu Val Val Met Ala Gly Val
 Ile Pro Ile Gln Gly Gly Ile Leu Asn Leu Asn Lys Met Val Lys
 Gln Val Thr Gly Lys Met Pro Ile Leu Ser Tyr Trp Pro Tyr Gly
                35
 Cys His Cys Gly Leu Gly Gly Arg Gly Gln Pro Lys Asp Ala Thr
 Asp Trp Cys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys
 Thr Gln Gly Cys Gly Ile Tyr Lys Asp Asn Asn Lys Ser Ser Ile
 His Cys Met Asp Leu Ser Gln Arg Tyr Cys Leu Met Ala Val Phe
                                 100
 Asn Val Ile Tyr Leu Glu Asn Glu Asp Ser Glu
               110
<210> 379
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 379
 ctgcctccac tgctctgtgc tggg 24
<210> 380
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 380
 cagagcagtg gatgttcccc tggg 24
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<210> 381

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<211> 45
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 381
ctgaacaaga tggtcaagca agtgactggg aaaatgccca tcctc 45
<210> 382
<211> 764
<212> DNA
<213> Homo sapiens
<400> 382
ctcqcttctt ccttctqqat gggggcccag ggggcccagg agagtataaa 50
ggcgatgtgg agggtgcccg gcacaaccag acgcccagtc acaggcgaga 100
gccctgggat gcaccggcca gaggccatgc tgctgctgct cacgcttgcc 150
ctcctggggg gcccacctg ggcagggaag atgtatggcc ctggaggagg 200
caaqtatttc agcaccactg aagactacga ccatgaaatc acagggctgc 250
 gggtgtctgt aggtcttctc ctggtgaaaa gtgtccaggt gaaacttgga 300
 gactcctggg acgtgaaact gggagcctta ggtgggaata cccaggaagt 350
caccetgeag ecaggegaat acateacaaa agtetttgte geetteeaag 400
ctttcctccq gggtatggtc atgtacacca gcaaggaccg ctatttctat 450
tttgggaage ttgatggeca gateteetet geetaeecea geeaagaggg 500
gcaggtgctg gtgggcatct atggccagta tcaactcctt ggcatcaaga 550
qcattqqctt tqaatqqaat tatccactag aggagccgac cactgagcca 600
ccaqttaatc tcacatactc agcaaactca cccqtqqqtc gctaqqqtgg 650
ggtatggggc catccgagct gaggccatct gtgtggtggt ggctgatggt 700
actggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa 750
gcttctgcag aaaa 764
<210> 383
<211> 178
<212> PRT
<213> Homo sapiens
<400> 383
Met His Arg Pro Glu Ala Met Leu Leu Leu Leu Thr Leu Ala Leu
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Leu Gly Gly Pro Thr Trp Ala Gly Lys Met Tyr Gly Pro Gly Gly
Gly Lys Tyr Phe Ser Thr Thr Glu Asp Tyr Asp His Glu Ile Thr
                                      40
Gly Leu Arg Val Ser Val Gly Leu Leu Leu Val Lys Ser Val Gln
Val Lys Leu Gly Asp Ser Trp Asp Val Lys Leu Gly Ala Leu Gly
Gly Asn Thr Gln Glu Val Thr Leu Gln Pro Gly Glu Tyr Ile Thr
                 80
Lys Val Phe Val Ala Phe Gln Ala Phe Leu Arg Gly Met Val Met
                                    100
Tyr Thr Ser Lys Asp Arg Tyr Phe Tyr Phe Gly Lys Leu Asp Gly
Gln Ile Ser Ser Ala Tyr Pro Ser Gln Glu Gly Gln Val Leu Val
                                    130
                                                         135
                125
Gly Ile Tyr Gly Gln Tyr Gln Leu Leu Gly Ile Lys Ser Ile Gly
Phe Glu Trp Asn Tyr Pro Leu Glu Glu Pro Thr Thr Glu Pro Pro
                                                         165
                155
Val Asn Leu Thr Tyr Ser Ala Asn Ser Pro Val Gly Arg
                170
                                    175
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<400> 384

getgagegtg tgegeggtac ggggetetec tgeettetgg getecaaege 50 agetetgtgg etgaaetggg tgeteateae gggaaetget gggetatgga 100 atacagatgt ggeageteag gtageeceaa attgeetgga agaatacate 150 atgttteg ataagaagaa attgtaggat eeagttttt ttttaaeege 200 eeeeteecea eeeeeaaaa aaaetgtaaa gatgeaaaaa egtaatatee 250 atgaagatee tattaeetag gaagattttg atgtttget gegaatgegg 300 tgttgggatt tatttgttet tggagtgtte tgegtggetg geaaagaata 350 atgtteeaaa ateggteeat eteeeaaggg gteeaatttt tetteetggg 400 tgteagegag eeetgaetea etaeagtgea getgaeaggg getgteatge 450

<210> 384

<211> 2379

<212> DNA

<213> Homo sapiens

aactggcccc taagccaaag caaaagacct aaggacgacc tttgaacaat 500 acaaaggatg ggtttcaatg taattaggct actgagcgga tcagctgtag 550 cactggttat agececeact gtettactga caatgettte ttetgeegaa 600 cgaggatgcc ctaagggctg taggtgtgaa ggcaaaatgg tatattgtga 650 atctcagaaa ttacaggaga taccctcaag tatatctgct ggttgcttag 700 gtttgtccct tcgctataac agccttcada aacttaagta taatcaattt 750 aaagggetea accageteae etggetatae ettgaeeata accatateag 800 caatattgac gaaaatgctt ttaatggaat acgcagactc aaagagctga 850 ttcttagttc caatagaatc tcctattttc ttaacaatac cttcagacct 900 gtgacaaatt tacggaactt ggatctgtcc tataatcagc tgcattctct 950 gggatctgaa cagtttcggg gcttgcggaa gctgctgagt ttacatttac 1000 ggtctaactc cctgagaacc atccctgtgc gaatattcca agactgccgc 1050 aacctggaac ttttggacct gggatataac cggatccgaa gtttagccag 1100 gaatgtcttt gctggcatga tcagactcaa agaacttcac ctggagcaca 1150 atcaattttc caagetcaac etggeeettt ttecaaggtt ggteageett 1200 cagaaccttt acttgcagtg gaataaaatc agtgtcatag gacagaccat 1250 gtcctggacc tggagctcct tacaaaggct tgatttatca ggcaatgaga 1300 tcgaagcttt cagtggaccc agtgttttcc agtgtgtccc gaatctgcag 1350 cgcctcaacc tggattccaa caagctcaca tttattggtc aagagatttt 1400 ggattcttgg atatccctca atgacatcag tcttgctggg aatatatggg 1450 aatgcagcag aaatatttgc tcccttgtaa actggctgaa aagttttaaa 1500 ggtctaaggg agaatacaat tatctgtgcc agtcccaaag agctgcaagg 1550 agtaaatgtg atcgatgcag tgaagaacta cagcatctgt ggcaaaagta 1600 ctacagagag gtttgatctg gccagggctc tcccaaagcc gacgtttaag 1650 cccaagctcc ccaggccgaa gcatgagagc aaaccccctt tgcccccgac 1700 ggtgggagec acagageceg geceagagae egatgetgae geegageaca 1750 tctctttcca taaaatcatc gcgggcagcg tggcgctttt cctgtccgtg 1800 ctcgtcatcc tgctggttat ctacgtgtca tggaagcggt accetgcgag 1850 catgaagcag ctgcagcagc gctccctcat gcgaaggcac aggaaaaaga 1900

aaagacagtc cctaaagcaa atgactccca gcacccagga attttatgta 1950 gattataaac ccaccaacac ggagaccagc gagatgctgc tgaatgggac 2000 gggaccctgc acctataaca aatcgggctc cagggagtgt gaggtatgaa 2050 ccattgtgat aaaaagagct cttaaaagct gggaaataag tggtgcttta 2100 ttgaactctg gtgactatca agggaacgcg atgcccccc tccccttccc 2150 tctccctctc actttggtgg caagatcctt ccttgtccgt tttagtgcat 2200 tcataatact ggtcatttc ctctcataca taatcaaccc attgaaattt 2250 aaataccaca atcaatgtga agcttgaact ccggtttaat ataataccta 2300 ttgtataaga ccctttactg attccattaa tgtcgcattt gttttaagat 2350 aaaacttctt tcataggtaa aaaaaaaaa 2379

<210> 385

<211> 513

<212> PRT

<213> Homo sapiens

<400> 385

Met Gly Phe Asn Val Ile Arg Leu Leu Ser Gly Ser Ala Val Ala 1 5 10 15

Leu Val Ile Ala Pro Thr Val Leu Leu Thr Met Leu Ser Ser Ala 20 25 30

Glu Arg Gly Cys Pro Lys Gly Cys Arg Cys Glu Gly Lys Met Val
35 40 45

Tyr Cys Glu Ser Gln Lys Leu Gln Glu Ile Pro Ser Ser Ile Ser
50 55 60

Ala Gly Cys Leu Gly Leu Ser Leu Arg Tyr Asn Ser Leu Gln Lys
65 70 75

Leu Lys Tyr Asn Gln Phe Lys Gly Leu Asn Gln Leu Thr Trp Leu 80 85 90

Tyr Leu Asp His Asn His Ile Ser Asn Ile Asp Glu Asn Ala Phe 95 100 105

Asn Gly Ile Arg Arg Leu Lys Glu Leu Ile Leu Ser Ser Asn Arg

Ile Ser Tyr Phe Leu Asn Asn Thr Phe Arg Pro Val Thr Asn Leu 125 130 135

Arg Asn Leu Asp Leu Ser Tyr Asn Gln Leu His Ser Leu Gly Ser 140 145 150

Glu	Gln	Phe	Arg	Gly 155	Leu	Arg	Lys	Leu	Leu 160	Ser	Leu	His	Leu	Arg 165
Ser	Asn	Ser	Leu	Arg 170	Thr	Ile	Pro	Val	Arg 175	Ile	Phe	Gln	Asp	Cys 180
Arg	Asn	Leu	Glu	Leu 185	Leu	Asp	Leu	Gly	Tyr 190	Asn	Arg	Ile	Arg	Ser 195
Leu	Ala	Arg	Asn	Val 200	Phe	Ala	Gly	Met	Ile 205	Arg	Leu	Lys	Glu	Leu 210
His	Leu	Glu	His	Asn 215	Gln	Phe	Ser	Lys	Leu 220	Asn	Leu	Ala	Leu	Phe 225
Pro	Arg	Leu	Val	Ser 230	Leu	Gln	Asn	Leu	Tyr 235	Leu	Gln	Trp	Asn	Lys 240
Ile	Ser	Val	Ile	Gly 245	Gln	Thr	Met	Ser	Trp 250	Thr	Trp	Ser	Ser	Leu 255
Gln	Arg	Leu	Asp	Leu 260	Ser	Gly	Asn	Glu	Ile 265	Glu	Ala	Phe	Ser	Gly 270
Pro	Ser	Val	Phe	Gln 275	Cys	Val	Pro	Asn	Leu 280	Gln	Arg	Leu	Asn	Leu 285
Asp	Ser	Asn	Lys	Leu 290	Thr	Phe	Ile	Gly	Gln 295	Glu	Ile	Leu	Asp	Ser 300
Trp	Ile	Ser	Leu	Asn 305	Asp	Ile	Ser	Leu	Ala 310	Gly	Asn	Ile	Trp	Glu 315
Cys	Ser	Arg	Asn	Ile 320	Cys	Ser	Leu	Val	Asn 325	Trp	Leu	Lys	Ser	Phe 330
Lys	Gly	Leu	Arg	Glu 335	Asn	Thr	Ile	Ile	Cys 340	Ala	Ser	Pro	Lys	Glu 345
Leu	Gln	Gly	Val	Asn 350	Val	Ile	Asp	Ala	Val 355	Lys	Asn	Tyr	Ser	Ile 360
Cys	Gly	Lys	Ser	Thr 365	Thr	Glu	Arg	Phe	Asp 370	Leu	Ala	Arg	Ala	Leu 375
Pro	Lys	Pro	Thr	Phe 380	Lys	Pro	Lys	Leu	Pro 385	Arg	Pro	Lys	His	Glu 390
Ser	Lys	Pro	Pro	Leu 395	Pro	Pro	Thr	Val	Gly 400	Ala	Thr	Glu	Pro	Gly 405
Pro	Glu	Thr	Asp	Ala 410	Asp	Ala	Glu	His	Ile 415	Ser	Phe	His	Lys	Ile 420
Ile	Ala	Gly	Ser	Val 425	Ala	Leu	Phe	Leu	Ser 430	Val	Leu	Val	Ile	Leu 435

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Leu Val Ile Tyr Val Ser Trp Lys Arg Tyr Pro Ala Ser Met Lys
 Gln Leu Gln Gln Arg Ser Leu Met Arg Arg His Arg Lys Lys
                 455
                                      460
 Arg Gln Ser Leu Lys Gln Met Thr Pro Ser Thr Gln Glu Phe Tyr
                 470
                                      475
 Val Asp Tyr Lys Pro Thr Asn Thr Glu Thr Ser Glu Met Leu Leu
                                      490
                 485
 Asn Gly Thr Gly Pro Cys Thr Tyr Asn Lys Ser Gly Ser Arg Glu
                                                           510
                 500
 Cys Glu Val
<210> 386
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 386
 ctgggatctg aacagtttcg gggc 24
<210> 387
<211> 24
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 387
ggtccccagg acatggtctg tccc 24
<210> 388
<211> 48
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 388
 gctgagttta catttacggt ctaactccct gagaaccatc cctgtgcg 48
<210> 389
<211> 1449
<212> DNA
<213> Homo sapiens
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<400> 389

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 Leu Pro Cys Glu Glu Asp Glu Met Cys Val Asn Tyr Asn Asp Gln
 His Pro Asn Gly Trp Tyr Ile Trp Ile Leu Leu Leu Val Leu
                  50
 Val Ala Ala Leu Leu Cys Gly Ala Val Leu Cys Leu Gln Cys
 Trp Leu Arg Arg Pro Arg Ile Asp Ser His Arg Arg Thr Met Ala
 Val Phe Ala Val Gly Asp Leu Asp Ser Ile Tyr Gly Thr Glu Ala
                  95
 Ala Val Ser Pro Thr Val Gly Ile His Leu Gln Thr Gln Thr Pro
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 Asp Leu Tyr Pro Val Pro Ala Pro Cys Phe Gly Pro Leu Gly Ser
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 Pro Pro Pro Tyr Glu Glu Ile Val Lys Thr Thr
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<400> 392

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<223> Synthetic oligonucleotide probe
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<211> 2340
<212> DNA
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<212> PRT
<213> Homo sapiens
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 His Tyr Thr Phe Gln Gln Pro Arg His Gln Ser Ser Val Lys Leu
 Arg Glu Gln Ile Leu Asp Leu Ser Lys Arg Tyr Val Lys Ala Leu
                  50
 Ala Glu Glu Asn Lys Asn Thr Val Asp Val Glu Asn Gly Ala Ser
 Met Ala Gly Tyr Ala Asp Leu Lys Arg Thr Ile Ala Val Leu Leu
 Asp Asp Ile Leu Gln Arg Leu Val Lys Leu Glu Asn Lys Val Asp
 Tyr Ile Val Val Asn Gly Ser Ala Ala Asn Thr Thr Asn Gly Thr
 Ser Gly Asn Leu Val Pro Val Thr Thr Asn Lys Arg Thr Asn Val
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<211> 2639
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<213> Homo sapiens
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<211> 353

<212> PRT

<213> Homo sapiens

<400> 397

Met Pro Trp Pro Leu Leu Leu Leu Leu Ala Val Ser Gly Ala Gln 1 5 10 15

Thr Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr 20 25 30

Phe Gly Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser 35 40 45

Gly Leu Gly Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr
50 55 60

Ala His Leu Asp Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu 65 70 75

Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp 80 85 90

Leu	Ser	His	Asn	Leu 95	Leu	Thr	Ser	Ile	Ser 100	Pro	Thr	Ala	Phe	Ser 105
Arg	Leu	Arg	Tyr	Leu 110	Glu	Ser	Leu	Asp	Leu 115	Ser	His	Asn	Gly	Leu 120
Thr	Ala	Leu	Pro	Ala 125	Glu	Ser	Phe	Thr	Ser 130	Ser	Pro	Leu	Ser	Asp 135
Val	Asn	Leu	Ser	His 140	Asn	Gln	Leu	Arg	Glu 145	Val	Ser	Val	Ser	Ala 150
Phe	Thr	Thr	His	Ser 155	Gln	Gly	Arg	Ala	Leu 160	His	Val	Asp	Leu	Ser 165
His	Asn	Leu	Ile	His 170	Arg	Leu	Val	Pro	His 175	Pro	Thr	Arg	Ala	Gly 180
Leu	Pro	Ala	Pro	Thr 185	Ile	Gln	Ser	Leu	Asn 190	Leu	Ala	Trp	Asn	Arg 195
Leu	His	Ala	Val	Pro 200	Asn	Leu	Arg	Asp	Leu 205	Pro	Leu	Arg	Tyr	Leu 210
Ser	Leu	Asp	Gly	Asn 215	Pro	Leu	Ala	Val	Ile 220	Gly	Pro	Gly	Ala	Phe 225
Ala	Gly	Leu	Gly	Gly 230	Leu	Thr	His	Leu	Ser 235	Leu	Ala	Ser	Leu	Gln 240
Arg	Leu	Pro	Glu	Leu 245	Ala	Pro	Ser	Gly	Phe 250	Arg	Glu	Leu	Pro	Gly 255
Leu	Gln	Val	Leu	Asp 260	Leu	Ser	Gly	Asn	Pro 265	Lys	Leu	Asn	Trp	Ala 270
Gly	Ala	Glu	Val	Phe 275	Ser	Gly	Leu	Ser	Ser 280	Leu	Gln	Glu	Leu	Asp 285
Leu	Ser	Gly	Thr	Asn 290	Leu	Val	Pro	Leu	Pro 295	Glu	Ala	Leu	Leu	Leu 300
His	Leu	Pro	Ala	Leu 305	Gln	Ser	Val	Ser	Val 310	Gly	Gln	Asp	Val	Arg 315
Cys	Arg	Arg	Leu	Val 320	Arg	Glu	Gly	Thr	Tyr 325	Pro	Arg	Arg	Pro	Gly 330
Ser	Ser	Pro	Lys	Val 335	Pro	Leu	His	Cys	Val 340	Asp	Thr	Arg	Glu	Ser 345
Ala	Ala	Arg	Gly	Pro 350	Thr	Ile	Leu							

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<400> 399
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<210> 400
<211> 44
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 400
 caaccccaag cttaactggg caggagctga ggtgttttca ggcc 44
<210> 401
<211> 1571
<212> DNA
<213> Homo sapiens
<400> 401
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 gaggetatat gegteaatte eccaaaacaa gttttgacat tteecetgaa 150
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<211> 261

<212> PRT

<213> Homo sapiens

<400> 402

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Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys
35 40 40

Gly	Ala	Thr	Thr	Cys 50	Ala	Thr	Asn	Ser	His 55	Ser	Asp	Ser	Glu	Leu 60
Arg	Pro	Glu	Ile	Phe 65	Ser	Ser	Arg	Glu	Ala 70	Trp	Gln	Phe	Phe	Leu 75
Leu	Leu	Trp	Ser	Pro 80	Asp	Phe	Arg	Pro	Lys 85	Met	Lys	Ala	Ser	Ser 90
Leu	Ala	Phe	Ser	Leu 95	Leu	Ser	Ala	Ala	Phe 100	Tyr	Leu	Leu	Trp	Thr 105
Pro	Ser	Thr	Gly	Leu 110	Lys	Thr	Leu	Asn	Leu 115	Gly	Ser	Cys	∙Val	Ile 120
Ala	Thr	Asn	Leu	Gln 125	Glu	Ile	Arg	Asn	Gly 130	Phe	Ser	Glu	Ile	Arg 135
Gly	Ser	Val	Gln	Ala 140	Lys	Asp	Gly	Asn	Ile 145	Asp	Ile	Arg	Ile	Leu 150
Arg	Arg	Thr	Glu	Ser 155	Leu	Gln	Asp	Thr	Lys 160	Pro	Ala	Asn	Arg	Cys 165
Cys	Leu	Leu	Arg	His 170	Leu	Leu	Arg	Leu	Tyr 175	Leu	Asp	Arg	Val	Phe 180
Lys	Asn	Tyr	Gln	Thr 185	Pro	Asp	His	Tyr	Thr 190	Leu	Arg	Lys	Ile	Ser 195
Ser	Leu	Ala	Asn	Ser 200	Phe	Leu	Thr	Ile	Lys 205	Lys	Asp	Leu	Arg	Leu 210
Ser	His	Ala	His	Met 215	Thr	Cys	His	Cys	Gly 220	Glu	Glu	Ala	Met	Lys 225
Ĺys	Tyr	Ser	Gln	Ile 230	Leu	Ser	His	Phe	Glu 235	Lys	Leu	Glu	Pro	Gln 240
Ala	Ala	Val	Val	Lys 245	Ala	Leu	Gly	Glu	Leu 250	Asp	Ile	Leu	Leu	Gln 255
Trp	Met	Glu	Glu	Thr 260	Glu									
<210> <211> <212> <213>	> 28 > DNA		cial	Sequ	ience	e								
<220> <223>		nthet	ic o	oligo	onucl	eoti	de p	orobe)					

<400> 403

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 ggacaatatc atgactcacg gtttatcaag tttatgttct ggactggtag 750
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 caaccacgag ataaacaagg aaggggactt ttgtataaat catcgactga 850
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<211> 323
<212> PRT
<213> Homo sapiens
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 Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp
 Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala
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 Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly
                  80
 Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg
 Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser
                                      115
                                                          120
                 110
 Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met
                                      130
                 125
 Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
 Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly
                                                          165
                 155
 Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile
 Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro
                                                          195
                                      190
 Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr
                                                          210
                 200
 Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu
                                      220
 Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu
                                                          240
                 230
 Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg
                                      250
                                                          255
                 245
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Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr
 Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly
                 275
                                     280
 Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met
 Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg
                                     310
                 305
Glu Met Ser Gly Val Ser Pro Phe
                 320
<210> 407
<211> 31
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<223> Synthetic oligonucleotide probe
<400> 407
cgcggatccc gttatcgtct tgcgctactg c 31
<210> 408
<211> 34
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 408
 gcggaattct taaaatggac tgactccact catc 34
<210> 409
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 cagcatttaa tgaaaaattt atgcttaaga agtaaaaatg gcaggcttcc 150
 tagataattt tcgttggcca gaatgtgaat gtattgactg gagtgagaga 200
 agaaatgctg tggcatctgt tgtcgcaggt atattgtttt ttacaggctg 250
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 accatgeett teacacatgt ggtgtatttt ceacattgge tttetteatg 350
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ataaatqctq tatccaatqc tcaggtgaga ggtgatagct atgaaagcgg 400. ctgtttagga agaacaggtg ctcgagtttg gcttttcatt ggtttcatgt 450 tgatgtttgg gtcacttatt gcttccatgt ggattctttt tggtgcatat 500 gttacccaaa atactgatgt ttatccggga ctagctgtgt tttttcaaaa 550 tgcacttata ttttttagca ctctgatcta caaatttgga agaaccgaag 600 agctatggac ctgagatcac ttcttaagtc acattttcct tttgttatat 650 tctqtttqta qataqqtttt ttatctctca gtacacattg ccaaatggag 700 tagattgtac attaaatgtt ttgtttcttt acatttttat gttctgagtt 750 ttgaaatagt tttatgaaat ttctttattt ttcattgcat agactgttaa 800 tatgtatata atacaagact atatgaattg gataatgagt atcagttttt 850 tattcctqaq atttaqaact tqatctactc cctgagccag ggttacatca 900 tcttgtcatt ttagaagtaa ccactcttgt ctctctggct gggcacggtg 950 qctcatqcct qtaatcccaq cactttggga ggccgaggcg ggccgattgc 1000 ttgaggtcaa gtgtttgaga ccagcctggc caacatggcg aaaccccatc 1050 tactaaaaat acaaaaatta gccaggcatg gtggtgggtg cctgtaatcc 1100 cagctacctg ggaggctgag gcaggagaat cgcttgaacc cggggggcag 1150 aggttgcagt gagctgagtt tgcgccactg cactctagcc tgggggagaa 1200 agtgaaactc cctctcaaaa aaaagaccac tctcagtatc tctgatttct 1250 qaaqatqtac aaaaaaatat aqcttcatat atctggaatg agcactgagc 1300 cataaaaqqt tttcaqcaaq ttqtaactta ttttqqccta aaaatgaggt 1350 ttttttggta aagaaaaaat atttgttctt atgtattgaa gaagtgtact 1400 tttatataat gatttttaa atgcccaaag gactagtttg aaagcttctt 1450 ttaaaaagaa ttcctctaat atgactttat gtgagaa 1487

<210> 410

<211> 158

<212> PRT

<213> Homo sapiens

<400> 410

Met Ala Gly Phe Leu Asp Asn Phe Arg Trp Pro Glu Cys Glu Cys 1 5 10 15

Ile Asp Trp Ser Glu Arg Arg Asn Ala Val Ala Ser Val Val Ala
20 25 30

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Gly Ile Leu Phe Phe Thr Gly Trp Trp Ile Met Ile Asp Ala Ala
                   35
 Val Val Tyr Pro Lys Pro Glu Gln Leu Asn His Ala Phe His Thr
  Cys Gly Val Phe Ser Thr Leu Ala Phe Phe Met Ile Asn Ala Val
  Ser Asn Ala Gln Val Arg Gly Asp Ser Tyr Glu Ser Gly Cys Leu
· Gly Arg Thr Gly Ala Arg Val Trp Leu Phe Ile Gly Phe Met Leu
 Met Phe Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Ala
                                      115
  Tyr Val Thr Gln Asn Thr Asp Val Tyr Pro Gly Leu Ala Val Phe
  Phe Gln Asn Ala Leu Ile Phe Phe Ser Thr Leu Ile Tyr Lys Phe
                                      145
 Gly Arg Thr Glu Glu Leu Trp Thr
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 ccaaactcga gcacctgttc 20
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 <223> Synthetic oligonucleotide probe
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<210> 414
<211> 1337
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<213> Homo sapiens
<400> 414
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 actgcatcta gaggagggcc gtctgtgagg ccactacccc tccagcaact 150
 gggaggtggg actgtcagaa gctggcccag ggtggtggtc agctgggtca 200
gggacctacg gcacctgctg gaccacctcg ccttctccat cgaagcaggg 250
 aagtgggage ctcgagccct cgggtggaag ctgaccccaa gccacccttc 300
 acctggacag gatgagagtg tcaggtgtgc ttcgcctcct ggccctcatc 350
 tttgccatag tcacgacatg gatgtttatt cgaagctaca tgagcttcag 400
 catgaaaacc atccgtctgc cacgctggct ggcagcctcg cccaccaagg 450
 agatecaggt taaaaagtae aagtgtggee teateaagee etgeecagee 500
 aactactttg cgtttaaaat ctgcagtggg gccgccaacg tcgtgggccc 550
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 ctgggacaga aggcatttga catgtactct ggagatgtta tgcacctagt 700
 gaaatteett aaagaaatte eggggggtge aetggtgetg gtggeeteet 750
 acgacgatcc agggaccaaa atgaacgatg aaagcaggaa actcttctct 800
 gacttgggga gttcctacgc aaaacaactg ggcttccggg acagctgggt 850
 cttcatagga gccaaagacc tcaggggtaa aagccccttt gagcagttct 900
 taaagaacag cccagacaca aacaaatacg agggatggcc agagctgctg 950
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 cccggcaggg gctgaggagg aggagcaggg ggtgctgcgt ggaaggtgct 1100
 gcaggtcett gcaegetgtg tegegeetet eeteetegga aacagaacee 1150
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teceaeagea cateetaeee ggaagaeeag eeteagaggg teettetgga 1200

accagctgtc tgtggagaga atggggtgct ttcgtcaggg actgctgacg 1250 gctggtcctg aggaaggaca aactgcccag acttgagccc aattaaattt 1300 tatttttgct ggttttgaaa aaaaaaaaaa aaaaaaa 1337

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220

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<223> Synthetic oligonucleotide probe
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<210> 417
<211> 18
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 417
 ggatggccag agctgctg 18
<210> 418
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 418
 aaagtacaag tgtggcctca tcaagc 26
<210> 419
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 419
 tctgactcct aagtcaggca ggag 24
<210> 420
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<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 420
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<210> 421
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<210> 422
<211> 1701
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 1528
<223> unknown base
<400> 422
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 tgtcctgggg atccagaaac ccatgatacc ctactgaaca ccgaatcccc 100
 tggaagccca cagagacaga gacagcaaga gaagcagaga taaatacact 150
 cacgccagga getegetege tetetetete teteteteae teeteeetee 200
 ctctctctct gcctgtccta gtcctctagt cctcaaattc ccagtcccct 250
 gcaccccttc ctgggacact atgttgttct ccgccctcct gctggaggtg 300
 atttggatcc tggctgcaga tgggggtcaa cactggacgt atgagggccc 350
 acatqqtcaq qaccattqqc caqcctctta ccctgagtgt ggaaacaatg 400
 cccagtcgcc catcgatatt cagacagaca gtgtgacatt tgaccctgat 450
 ttgcctgctc tgcagcccca cggatatgac cagcctggca ccgagccttt 500
 ggacctgcac aacaatggcc acacagtgca actetetetg ceetetacee 550
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 atgacagett gagtgagget getgagagge etcagggeet ggetgteetg 750
 ggcatcctaa ttgaggtggg tgagactaag aatatagctt atgaacacat 800
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<210> 423

<211> 337

<212> PRT

<213> Homo sapiens

<400> 423

Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala 1 5 10 15

Ala Asp Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln
20 25 30

Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln
35 40 45

Ser Pro Ile Asp Île Gln Thr Asp Ser Val Thr Phe Asp Pro Asp 50 55 60

Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu
65 70 75

Pro Leu Asp Leu His Asn Asn Gly His Thr Val Gln Leu Ser Leu 80 85 90

Pro	Ser	Thr	Leu	Tyr 95	Leu	Gly	Gly	Leu	Pro 100	Arg	Lys	Tyr	Val	Ala 105
Ala	Gln	Leu	His	Leu 110	His	Trp	Gly	Gln	Lys 115	Gly	Ser	Pro	Gly	Gly 120
Ser	Glu	His	Gln	Ile 125	Asn	Ser	Glu	Ala	Thr 130	Phe	Ala	Glu	Leu	His 135
Ile	Val	His	Tyr	Asp 140	Ser	Asp	Ser	Tyr	Asp 145	Ser	Leu	Ser	Glu	Ala 150
Ala	Glu	Arg	Pro	Gln 155	Gly	Leu	Ala	Val	Leu 160	Gly	Ile	Leu	Ile	Glu 165
Val	Gly	Glu	Thr	Lys 170	Asn	Ile	Ala	Tyr	Glu 175	His	Ile	Leu	Ser	His 180
Leu	His	Glu	Val	Arg 185	His	Lys	Asp	Gln	Lys 190	Thr	Ser	Val	Pro	Pro 195
Phe	Asn	Leu	Arg	Glu 200	Leu	Leu	Pro	Lys	Gln 205	Leu	Gly	Gln	Tyr	Phe 210
Arg	Tyr	Asn	Gly	Ser 215	Leu	Thr	Thr	Pro	Pro 220	Cys	Tyr	Gln	Ser	Val 225
Leu	Trp	Thr	Val	Phe 230	Tyr	Arg	Arg	Ser	Gln 235	Ile	Ser	Met	Glu	Gln 240
Leu	Glu	Lys	Leu	Gln 245	Gly	Thr	Leu	Phe	Ser 250	Thr	Glu	Glu	Glu	Pro 255
Ser	Lys	Leu	Leu	Val 260	Gln	Asn	Tyr	Arg	Ala 265	Leu	Gln	Pro	Leu	Asn 270
Gln	Arg	Met	Val	Phe 275	Ala	Ser	Phe	Ile	Gln 280	Ala	Gly	Ser	Ser	Tyr 285
Thr	Thr	Gly	Glu	Met 290	Leu	Ser	Leu	Gly	Val 295	Gly	Ile	Leu	Val	Gly 300
Cys	Leu	Cys	Leu	Leu 305	Leu	Ala	Val	Tyr	Phe 310	Ile	Ala	Arg	Lys	Ile 315
Arg	Lys	Lys	Arg	Leu 320	Glu	Asn	Arg	Lys	Ser 325	Val	Val	Phe	Thr	Ser 330
Ala	Gln	Ala	Thr	Thr 335	Glu	Ala								
/21 0 \	. 404													

<210> 424

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe
<400> 424
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<210> 425
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 425
 cccgatctgc ctgctgta 18
<210> 426
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 426
 ctgcactgta tggccattat tgtg 24
<210> 427
<211> 45
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 427
 cagaaaccca tgatacccta ctgaacaccg aatcccctgg aagcc 45
<210> 428
<211> 1073
<212> DNA
<213> Homo sapiens
<400> 428
 aatttttcac cagagtaaac ttgagaaacc aactggacct tgagtattgt 50
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 gattctactg ttttgtcttc taggatcaac tcggtcatta ccacagctca 150
 aacctgcttt gggactccct cccacaaaac tggctccgga tcagggaaca 200
 ctaccaaacc aacagcagtc aaatcaggtc tttccttctt taagtctgat 250
 accattaaca cagatgetea caetggggee agatetgeat etgttaaate 300
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ctgctgcagg aatgacacct ggtacccaga cccacccatt gaccctggga 350 gggttgaatg tacaacagca actgcaccca catgtgttac caatttttgt 400 cacacaactt ggagcccagg gcactatcct aagctcagag gaattgccac 450 aaatcttcac gagcctcatc atccattcct tgttcccggg aggcatcctg 500 cccaccagtc aggcagggc taatccagat gtccaggatg gaagccttcc 550 agcaggagga gcaggtgtaa atcctgccac ccagggaacc ccagcaggcc 600 gcctcccaac tcccagtggc acagatgacg actttgcagt gaccacccct 650 gcaggcatcc aaaggagcac acatgccatc gaggaagcca ccacagaatc 700 agcaaatgga attcagtaag ctgtttcaaa ttttttcaac taagctgcct 750 cgaatttggt gatacatgtg aatctttatc attgattata ttatggaata 800 gattgagaca cattggatag tcttagaaga aattaattct taatttacct 850 gaaaatattc ttgaaatttc agaaaatatg ttctatgtag agaatcccaa 900 cttttaaaaa caataattca atggataaat ctgtctttga aatataacat 950 tatgctgcct ggatgatatg catattaaaa catatttgga aaactggaaa 1000 aaaaaaaaa aaaaaaaaaa aaa 1073

<210> 429

<211> 209

<212> PRT

<213> Homo sapiens

<400> 429

Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg
1 5 10 15

Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys 20 25 30

Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn 35 40 45

Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu
50 55 60

Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met
65 70 75

Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn 80 85 90

Val Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr

95 100 105 Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly 125 130 135 Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp 140 145 Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Asn Pro Ala Thr Gln 160 Gly Thr Pro Ala Gly Arg Leu Pro Thr Pro Ser Gly Thr Asp Asp 180 170 175 Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His 185 190 Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln 205 200 <210> 430 <211> 1257 <212> DNA

<213> Homo Sapien

<400> 430

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aattaatat catcgcactt cttctgtgga aggactttgt gaaggaattg 750 gtgctggatt agtggatgtt gctatctggg ttggcacttg ttcagattac 800 ccaaaaggag atgcttctac tggatggaat tcagtttctc gcatcattat 850 tgaaggaacta ccaaaataaa tgctttaatt ttcatttgct acctctttt 900 ttattatgcc ttggaatggt tcacttaaat gacattttaa ataagtttat 950 gtatacatct gaatgaaaag caaagctaaa tatgtttaca gaccaaagtg 1000 tgatttcaca ctgttttaa atctagcatt attcatttg cttcaatcaa 1050 aagtggttc aatatttt ttagttggt agaatactt cttcatagtc 1100 acattctctc aacctataat ttggaatatt gttgtggtct tttgttttt 1150 ctcttagtat agcatttta aaaaaatata aaagctacca atctttgtac 1200 aatttgtaaa tgttaagaat ttttttata tctgttaaat aaaaattatt 1250 tccaaca 1257

<210> 431

<211> 243

<212> PRT

<213> Homo Sapien

<400> 431

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1 5 10 15

Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala 20 25 30

Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg
35 40 45

Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala 50 55 60

Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
65 70 75

Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys 80 85 90

Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn 95 100 105

Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu 110 115 120

Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser 125 130 135

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Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
 Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
                                      160
 Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
 Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
 Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
                 200
 Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
 Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu
 Leu Pro Lys
<210> 432
<211> 18
<212> DNA
<213> Artificial Sequence
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<210> 433
<211> 21
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<223> Synthetic oligonucleotide probe
<400> 433
cgcaggacag ttgtgaaaat a 21
<210> 434
<211> 21
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 434
atgacgeteg tecaaggeea e 21
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<210> 435
<211> 19
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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<210> 436
<211> 24
<212> DNA
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<400> 439
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<210> 440
<211> 19
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<212> DNA
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